STIC Search Report
Biotech-Chem Library

STIC Database Tracking Number: 97968

TO: Ralph J Gitomer
Location: 11b01 / 11d11
Wednesday, July 02, 2003
Art Unit: 1651
Phone: 308-0732
Serial Number: 09 / 469637

From: Jan Delaval
Location: Biotech-Chem Library
CM1-1E07
Phone: 308-4498

jan.delaval@uspto.gov

Search Notes

Jan Delaval
Reference Librarian
Biotechnology & Chemical Library
CM1 1E07 – 703-308-4498
jan.delaval@uspto.gov

JAN

Access DB# 97968

SEARCH REQUEST FORM

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Scientific and Technical Information Center

Requester's Full Name: R GITOMER Examiner #: 69850 (STIC) Date: 7/2/03

Art Unit: 1651 Phone Number 30 8-0732 Serial Number: 09/469,637

Mail Box and Bldg/Room Location: 11301 11D11 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

****

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures; keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: _____

Inventors (please provide full names): _____

Earliest Priority Filing Date: _____

***For Sequence Searches Only* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.**

JAN

Jan Delaval
Reference Librarian
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CM1 1E07 – 703-308-4498
jan.delaval@uspto.gov

****

STAFF USE ONLY

Searcher: Jan

Searcher Phone #: 4698

Searcher Location: _____

Date Searcher Picked Up: 7/2/03

Date Completed: 7/2/03

Searcher Prep & Review Time: _____

Clerical Prep Time: 10

Online Time: 80

Type of Search

NA Sequence (#) _____

AA Sequence (#) _____

Structure (#) _____

Bibliographic ✓

Litigation _____

Fulltext _____

Patent Family _____

Other _____

Vendors and cost where applicable

STN ✓

Dialog _____

Questel/Orbit _____

Dr.Link _____

Lexis/Nexis _____

Sequence Systems _____

WWW/Internet _____

Other (specify) _____

PTO-1590 (8-01)

[redacted]

7/2/2003

The deal here is the test finds the enzyme in urine as a screening test for most all cancers. The priority date is 4/26/1996. Lots of enzymes are MMP's such as calpains.

Thanks,

RG

MMP's ARE CLASS EC 3.4.24
TYPE IV COLLAGENASE, GELATINASES
STROMELYSINS

Jan Delaval
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```
=> d his

     (FILE 'HOME' ENTERED AT 16:39:29 ON 02 JUL 2003)
               SET COST OFF

     FILE 'REGISTRY' ENTERED AT 16:39:38 ON 02 JUL 2003
L1          319 S MMP
L2         1574 S (?METALLOPROTEASE? OR ?METALLOPROTEINASE?)/CNS
L3          532 S (MATRIX(L)?METALLO?(L)(?PROTEASE? OR ?PROTEINASE?))/CNS
L4           61 S L1 NOT L2,L3
L5            7 S L4 NOT SQL/FA
L6           54 S L4 NOT L5
L7         1709 S L2-L3,L6
L8          646 S (?GELATINASE? OR ?COLLAGENASE? OR ?STROMELYSIN?)/CNS
L9         2234 S L7,L8
               E "E C E.4.24"/CN
L10        2255 S (?METALLO?(L)(?PROTEASE? OR ?PROTEINASE?))/CNS
L11         599 S L10 NOT L1-L9
L12          47 S L11 NOT SQL/FA
L13        2833 S L9-L12

     FILE 'HCAPLUS' ENTERED AT 16:45:08 ON 02 JUL 2003
L14       29027 S L13
L15       17098 S ?METALLOPROTEINASE? OR ?METALLOPROTEASE? OR ?METALLO?(L)(?PRO
L16       10664 S MATRIX(L)(?METALLOPROTEINASE? OR ?METALLOPROTEASE? OR ?METALL
L17        8017 S MMP
L18       33659 S L14-L17
               E MMP
L19        1660 S E4-E47
L20       33885 S L18,L19
L21         361 S L20 AND URINE
               E URINE ANALYSIS/CT
L22       38262 S E3,E5
               E E3+ALL
               E E5+ALL
L23       80202 S E3
L24         250 S L20 AND L22,L23
L25         361 S L21,L24
L26         165 S L25 AND (PY<=1996 OR PRY<=1996 OR AY<=1996)

     FILE 'REGISTRY' ENTERED AT 16:51:19 ON 02 JUL 2003
L27       20501 S (?PROTEASE? OR ?PROTEINASE?)/CNS
L28       18229 S L27 NOT L13

     FILE 'HCAPLUS' ENTERED AT 16:51:34 ON 02 JUL 2003
L29      115014 S L28
L30      140491 S ?PROTEASE? OR ?PROTEINASE?
L31        1638 S L29,L30 AND (URINE OR L22 OR L23)
L32        1079 S L31 AND (PY<=1996 OR PRY<=1996 OR AY<=1996)
L33        1171 S L26,L32
L34         138 S L33 AND (?NEOPLAS? OR ?TUMOR? OR ?TUMOUR? OR ?MALIGN? OR ?MET
               E NEOPLASM/CT
L35          26 S L33 AND E2-E30
L36          10 S L33 AND E41-E45,E47,E48,E53-E57
               E E3+ALL
L37          11 S L33 AND E3-E8
L38          57 S L33 AND E2+NT
L39           3 S L33 AND E116+NT
L40           8 S L33 AND (E121+NT OR E122+NT)
L41         153 S L34-L40
               E DIAGNOSIS/CT
L42        7719 S E5
               E E3+ALL
```

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CM1 1E07 – 703-308-4498
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L43	43875	S E2+NT
		E E10+ALL
L44	10041	S E1
L45	17	S L33 AND L42-L44
L46	9	S L41 AND L45
		SEL DN AN 1 3 6 7 8
L47	5	S E1-E15 AND L46
L48	4	S L46 NOT L47
		E KIDNEY CANCER/CT
		E E3+ALL
L49	6810	S E2+NT
		E E2+ALL
L50	79	S E5
		E SKIN CANCER/CT
		E E3+ALL
L51	7669	S E2+NT
		E E2+ALL
L52	209	S E5
L53	10853	S E30+NT
		E E30+ALL
L54	400	S E4
		E OVARY CANCER/CT
		E E3+ALL
L55	10138	S E2+NT
		E E2+ALL
L56	94	S E5
		E PROSTATE CANCER/CT
L57	6430	S E10-E14,E16-E17,E22
L58	11706	S E25-E30
L59	246	S E33
		E S E39,E40
		E PROSTATE GLAND, DISEASE/CT
L60	3619	S E5
		E PROSTATE CANCER/CT
		E E3+ALL
L61	11706	S E2
		E NERVOUS SYSTEM CANCER/CT
		E E9+ALL
L62	1881	S E2
		E E2+ALL
		E E3+ALL
L63	683	S E47-E49,E52
		E BREAST CANCER/CT
		E E3+ALL
L64	31953	S E2
		E MAMMARY GLAND/CT
L65	10215	S E4,E5,E7,E8,E15,E16,E22
L66	31953	S E26-E35
L67	6750	S E40,E41
		E LUNG CANCER/CT
		E E3+ALL
L68	21137	S E2+NT
		E E2+ALL
L69	235	S E5
		E RETINAL CANCER/CT
		E RETINA CANCER/CT
		E EYE CANCER/CT
		E E3+ALL
L70	1381	S E2+NT
		E E2+ALL
L71	8	S E5
L72	1489	S E3+NT(L)TUMOR?
L73	772	S E3+NT(L)CANCER?

```
                E RETINA/CT
                E E3+ALL
L74          95 S E2(L)(TUMOR? OR NEOPLAS? OR CANCER?)
                E LIVER CANCER/CT
                E E25+ALL
L75       24777 S E2+NT
                E E2+ALL
L76         856 S E5
                E PANCREATIC CANCER/CT
                E E54+ALL
L77        6243 S E2+NT
                E E2+ALL
L78          21 S E5
                E BLADDER CANCER/CT
L79        1388 S E12
                E E12+ALL
                E E3+ALL
                E LYMPHOMA/CT
                E E3+ALL
L80       15103 S E7,E6+NT
                E DIGESTIVE TRACT CANCER/CT
L81         325 S E7
                E E7+ALL
                E DIGESTIVE TRACT/CT
L82         242 S E5
L83        1684 S E29,E30
                E GASTROINTESTIN/CT
                E E27+ALL
L84        1684 S E2
L85          31 S L49-L84 AND L33
L86           4 S L85 AND L42-L44
                E UROGENITAL CANCER/CT
                E E7+ALL
L87       33122 S E4,E3+NT(L)(CANCER? OR NEOPLAS? OR TUMOR?)
L88          21 S L87 AND L33
L89           3 S L88 AND L42-L44
L90           5 S L47,L86,L89
L91          43 S L45,L48,L85,L88 NOT L90
                SEL DN AN 3 9 12-14 16-18 21 24 28 32 34-37 39-43
L92          21 S L91 AND E1-E63
L93          26 S L90,L92
L94         113 S L41 NOT L88-L93
                SEL DN AN 2 7 9 16 25 26 47 81 89 90 93 94 95 96 98 101-105 107
L95          22 S L94 AND E64-E129
L96          48 S L93,L95 AND L14-L26,L29-L95
L97          43 S L96 AND (?TUMOR? OR ?TUMOUR? OR ?METAST? OR ?MALIGN? OR ?CANC
L98           5 S L96 NOT L97
                SEL DN AN 1 5
L99           2 S L98 AND E130-E135
L100         45 S L97,L99
                SEL HIT RN

     FILE 'REGISTRY' ENTERED AT 17:39:20 ON 02 JUL 2003
L101         26 S E136-E161

     FILE 'HCAPLUS' ENTERED AT 17:39:40 ON 02 JUL 2003
                E MOSES M/AU
L102         57 S E3,E4,E13-E15
                E FREEMAN M/AU
L103        136 S E3,E20
L104         14 S E91
L105         52 S E108,E109,E112
                E WIEDERSCHAIN D/AU
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L106          20 S E4-E6
L107          39 S L102-L106 AND L20,L29,L30
L108           7 S L107 AND L31
L109          49 S L100,L108
                 SEL HIT RN L108

     FILE 'REGISTRY' ENTERED AT 17:42:19 ON 02 JUL 2003
L110          10 S E1-E10
L111          26 S L101,L110

=> fil reg
FILE 'REGISTRY' ENTERED AT 17:42:44 ON 02 JUL 2003
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
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Property values tagged with IC are from the ZIC/VINITI data file
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STRUCTURE FILE UPDATES:     1 JUL 2003  HIGHEST RN 540721-20-8
DICTIONARY FILE UPDATES:    1 JUL 2003  HIGHEST RN 540721-20-8

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2003

  Please note that search-term pricing does apply when
  conducting SmartSELECT searches.

Crossover limits have been increased.  See HELP CROSSOVER for details.

Experimental and calculated property data are now available.  See HELP
PROPERTIES for more information.  See STNote 27, Searching Properties
in the CAS Registry File, for complete details:
http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

=> s l111 and l1-l13
L112          11 L111 AND (L1 OR L2 OR L3 OR L4 OR L5 OR L6 OR L7 OR L8 OR L9 OR
                  L10 OR L11 OR L12 OR L13)

=> s l111 and l27
L113          25 L111 AND L27

=> s l112,l113,l111
L114          26 (L112 OR L113 OR L111)

=> d ide can tot

L114 ANSWER 1 OF 26  REGISTRY  COPYRIGHT 20
RN   157857-21-1  REGISTRY
CN   Proteinase inhibitor, maspin (9CI)  (C
OTHER NAMES:
CN   Maspin
CN   Serine proteinase inhibitor maspin
MF   Unspecified
CI   MAN
SR   CA
LC   STN Files:   ADISINSIGHT, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CAPLUS, CIN,
       EMBASE, PROMT, TOXCENTER, USPAT2, USPATFULL

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
              119 REFERENCES IN FILE CA (1957 TO DATE)
                3 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
              119 REFERENCES IN FILE CAPLUS (1957 TO DATE)
```

Hits for CAS references

REFERENCE 1: 138:399519

REFERENCE 2: 138:384176

REFERENCE 3: 138:383070

REFERENCE 4: 138:380512

REFERENCE 5: 138:378768

REFERENCE 6: 138:317910

REFERENCE 7: 138:235743

REFERENCE 8: 138:219228

REFERENCE 9: 138:183107

REFERENCE 10: 138:182964

L114 ANSWER 2 OF 26 REGISTRY COPYRIGHT 2003 ACS
RN **148196-69-4** REGISTRY
CN **Proteinase inhibitor, protease-nexin I (9CI)** (CA INDEX NAME)
OTHER NAMES:
CN Glia-derived nexins
CN Glycoproteins, glia-derived nexins
CN Glycoproteins, neuroglia-derived nexins
CN Growth factors (animal), neuroglia-derived neurite extension factors
CN Neuroglia-derived neurite extension factors animal growth regulators
CN Neuroglia-derived nexins
CN Nexins 1
CN Nexins, glia-derived
CN Nexins, neuroglia-derived
CN Plasminogen activator inhibitor PN-1
CN **Platelet proteinase-nexin I proteins**
CN PNIp proteins
CN **Protease-nexin I**
CN **Proteinase-nexin 1**
CN **Proteinase-nexin I proteins, platelet**
CN **Proteinase-nexins I**
CN Proteins, nexins, 1
CN Proteins, PNIp
CN **Proteins, PNIp (proteinase-nexin I, platelet)**
CN **Proteins, protease nexin I**
CN **Proteins, proteinase-nexin I, platelet**
CN **Proteins, proteinase-nexins I**
CN **Serine protease inhibitor-E2**
CN SERPINE2
MF Unspecified
CI MAN
SR CA
LC STN Files: AGRICOLA, BIOSIS, CA, CAPLUS, PHAR, PROMT, TOXCENTER, USPATFULL

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
164 REFERENCES IN FILE CA (1957 TO DATE)
12 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
165 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 139:4221

REFERENCE 2: 138:383344

REFERENCE 3: 138:352059

REFERENCE 4: 138:248894

REFERENCE 5: 138:233860

REFERENCE 6: 138:200825

REFERENCE 7: 138:53397

REFERENCE 8: 137:350625

REFERENCE 9: 137:320904

REFERENCE 10: 137:246407

L114 ANSWER 3 OF 26 REGISTRY COPYRIGHT 2003 ACS
RN **146480-36-6** REGISTRY
CN **Gelatinase B (9CI)** (CA INDEX NAME)
OTHER NAMES:
CN **92,000-Mol.-wt. gelatinase**
CN **92,000-Mol.-wt. type IV collagenase**
CN **92-kD Gelatinase**
CN **92-kDa Gelatinase**
CN **92-kDa Type IV collagenase**
CN **95 kDa Type IV collagenase/gelatinase**
CN **Collagenase IV**
CN **Collagenase type IV**
CN E.C. 3.4.24.35
CN **Gelatinase MMP 9**
CN **Matrix metalloprotease 9**
CN **Matrix metalloproteinase 9**
CN **MMP 9**
CN **Type IV collagen metalloproteinase**
CN **Type IV collagenase**
CN **Type IV collagenase/gelatinase**
MF Unspecified
CI MAN
SR CA
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CAPLUS, CEN, CIN, EMBASE, PROMT, TOXCENTER, USPAT2, USPATFULL

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
3325 REFERENCES IN FILE CA (1957 TO DATE)
12 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
3339 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 139:12297

REFERENCE 2: 139:12220

REFERENCE 3: 139:5593

REFERENCE 4: 139:5353

REFERENCE 5: 139:5124

REFERENCE 6: 139:4956

REFERENCE 7: 139:4843

REFERENCE 8: 139:4695

REFERENCE 9: 139:4677

REFERENCE 10: 139:4608

L114 ANSWER 4 OF 26 REGISTRY COPYRIGHT 2003 ACS
RN **146480-35-5** REGISTRY
CN **Gelatinase A (9CI)** (CA INDEX NAME)
OTHER NAMES:
CN **72 kDa Gelatinase**
CN **72 kDa Gelatinase type A**
CN **72,000-Mol.-wt. gelatinase**
CN **72,000-Mol.-wt. type IV collagenase**
CN **Collagenase IV**
CN **Collagenase type IV**
CN E.C. 3.4.24.24
CN **Matrix metalloprotease 2**
CN **Matrix metalloproteinase 2**
CN **MMP 2**
CN **Type IV collagen metalloproteinase**
CN **Type IV collagenase**
CN **Type IV collagenase/gelatinase**
MF Unspecified
CI MAN
SR CA
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CAPLUS, CEN, CIN, EMBASE, PROMT, TOXCENTER, USPAT2, USPATFULL

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
3482 REFERENCES IN FILE CA (1957 TO DATE)
11 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
3502 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 139:12297

REFERENCE 2: 139:12220

REFERENCE 3: 139:5158

REFERENCE 4: 139:5124

REFERENCE 5: 139:5103

REFERENCE 6: 139:4977

REFERENCE 7: 139:4956

REFERENCE 8: 139:4843

REFERENCE 9: 139:4769

REFERENCE 10: 139:4695

L114 ANSWER 5 OF 26 REGISTRY COPYRIGHT 2003 ACS
RN **142243-03-6** REGISTRY
CN **Proteinase inhibitor, PAI-2 (9CI)** (CA INDEX NAME)
OTHER NAMES:
CN Cytokines, minactivin
CN Minactivin
CN PAI 2
CN Plasminogen activator inhibitor type 2
CN Plasminogen activator inhibitor type II
CN Plasminogen activator inhibitor-2
CN Plasminogen activator-2

CN Type 2 plasminogen activator inhibitor
DR 143514-72-1
MF Unspecified
CI MAN
SR CA
LC STN Files: ADISINSIGHT, ADISNEWS, AGRICOLA, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CAPLUS, CIN, EMBASE, PROMT, TOXCENTER, USPAT2, USPATFULL

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
456 REFERENCES IN FILE CA (1957 TO DATE)
14 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
458 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 139:4614

REFERENCE 2: 139:2771

REFERENCE 3: 138:366651

REFERENCE 4: 138:363865

REFERENCE 5: 138:335704

REFERENCE 6: 138:316031

REFERENCE 7: 138:299091

REFERENCE 8: 138:285553

REFERENCE 9: 138:285114

REFERENCE 10: 138:285070

L114 ANSWER 6 OF 26 REGISTRY COPYRIGHT 2003 ACS
RN **141907-41-7** REGISTRY
CN **Proteinase, matrix metallo- (9CI)** (CA INDEX NAME)
OTHER NAMES:
CN **Matrix metalloendoproteinase**
CN **Matrix metalloprotease**
CN **Matrix metalloprotease HIPHUM35**
CN **Matrix metalloproteinase**
CN **Matrix-degrading metalloproteinase**
MF Unspecified
CI MAN
SR CA
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BIOBUSINESS, BIOSIS, CA, CAPLUS, CEN, CHEMCATS, CIN, PROMT, TOXCENTER, USPAT2, USPATFULL

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
2458 REFERENCES IN FILE CA (1957 TO DATE)
15 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
2465 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 139:12251

REFERENCE 2: 139:7161

REFERENCE 3: 139:5124

REFERENCE 4: 139:5103

REFERENCE 5: 139:4431

REFERENCE 6: 139:4430

REFERENCE 7: 139:4337

REFERENCE 8: 139:3984

REFERENCE 9: 139:3873

REFERENCE 10: 139:3165

L114 ANSWER 7 OF 26 REGISTRY COPYRIGHT 2003 ACS
RN **140208-24-8** REGISTRY
CN **Proteinase inhibitor, TIMP 1 (9CI)** (CA INDEX NAME)
OTHER NAMES:
CN TIMP 1
CN **Tissue inhibitor of metalloproteinase-1**
MF Unspecified
CI MAN
SR CA
LC STN Files: AGRICOLA, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CAPLUS, CIN, EMBASE, PROMT, TOXCENTER, USPAT2, USPATFULL

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
1799 REFERENCES IN FILE CA (1957 TO DATE)
35 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
1806 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 139:5124

REFERENCE 2: 139:4977

REFERENCE 3: 139:4956

REFERENCE 4: 139:4843

REFERENCE 5: 139:4608

REFERENCE 6: 139:4555

REFERENCE 7: 139:4299

REFERENCE 8: 139:2583

REFERENCE 9: 138:400344

REFERENCE 10: 138:400140

L114 ANSWER 8 OF 26 REGISTRY COPYRIGHT 2003 ACS
RN **140208-23-7** REGISTRY
CN **Proteinase inhibitor, PAI-1 (9CI)** (CA INDEX NAME)
OTHER NAMES:
CN EIP-1 sialoglycoproteins
CN PAI-1
CN Plasminogen activator inhibitor I
CN Plasminogen activator inhibitor type 1
CN Plasminogen activator inhibitor-1
CN Plasminogen activator-inhibiting proteins, 1
CN **Protease inhibitor PAI-1**
CN Sialoglycoproteins, EIP-1
CN Sialoglycoproteins, EIP-1 (epidermal growth factor-induced protein 1)
CN Type 1 plasminogen activator inhibitor
MF Unspecified
CI MAN

SR CA
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CAPLUS, CIN, EMBASE, IPA, PROMT, TOXCENTER, USPAT2, USPATFULL

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
3412 REFERENCES IN FILE CA (1957 TO DATE)
99 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
3419 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 139:4837

REFERENCE 2: 139:4790

REFERENCE 3: 139:4776

REFERENCE 4: 139:4769

REFERENCE 5: 139:4754

REFERENCE 6: 139:4719

REFERENCE 7: 139:4608

REFERENCE 8: 139:4189

REFERENCE 9: 139:4144

REFERENCE 10: 139:2946

L114 ANSWER 9 OF 26 REGISTRY COPYRIGHT 2003 ACS
RN **138674-34-7** REGISTRY
CN **Proteinase inhibitor, cysteine (9CI)** (CA INDEX NAME)
OTHER NAMES:
CN **Cysteine protease inhibitor**
CN **Cysteine proteinase inhibitor**
CN **Thiol proteinase inhibitor**
MF Unspecified
CI MAN
SR CA
LC STN Files: AGRICOLA, BIOBUSINESS, BIOSIS, CA, CAPLUS, CIN, PROMT, TOXCENTER, USPATFULL

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
266 REFERENCES IN FILE CA (1957 TO DATE)
4 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
267 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 138:381348

REFERENCE 2: 138:351238

REFERENCE 3: 138:318773

REFERENCE 4: 138:314594

REFERENCE 5: 138:299211

REFERENCE 6: 138:285153

REFERENCE 7: 138:283101

REFERENCE 8: 138:276058

REFERENCE 9: 138:236330

REFERENCE 10: 138:216003

L114 ANSWER 10 OF 26 REGISTRY COPYRIGHT 2003 ACS
RN **124861-55-8** REGISTRY
CN **Proteinase inhibitor, TIMP 2 (9CI)** (CA INDEX NAME)
OTHER NAMES:
CN TIMP 2
CN **TIMP-2 proteinase inhibitor**
CN **Tissue inhibitor metalloproteinase-2**
DR 127497-59-0
MF Unspecified
CI MAN
SR CA
LC STN Files: ADISINSIGHT, AGRICOLA, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAPLUS, CIN, DDFU, DRUGU, EMBASE, MEDLINE, PHAR, PROMT, TOXCENTER, USPAT2, USPATFULL

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
1291 REFERENCES IN FILE CA (1957 TO DATE)
31 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
1293 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 139:5124

REFERENCE 2: 139:4977

REFERENCE 3: 139:4956

REFERENCE 4: 139:4608

REFERENCE 5: 139:4555

REFERENCE 6: 139:4299

REFERENCE 7: 138:400344

REFERENCE 8: 138:399515

REFERENCE 9: 138:398134

REFERENCE 10: 138:383385

L114 ANSWER 11 OF 26 REGISTRY COPYRIGHT 2003 ACS
RN **119345-31-2** REGISTRY
CN **Gelatinase, pro- (9CI)** (CA INDEX NAME)
OTHER NAMES:
CN **Progelatinase**
CN **Type IV procollagenase**
MF Unspecified
CI MAN
SR CA
LC STN Files: AGRICOLA, BIOSIS, CA, CAPLUS, TOXCENTER, USPATFULL

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
54 REFERENCES IN FILE CA (1957 TO DATE)
9 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
54 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 135:55550

REFERENCE 2: 133:333153

REFERENCE 3: 132:204836

REFERENCE 4: 129:173622

REFERENCE 5: 129:147271

REFERENCE 6: 129:63704

REFERENCE 7: 125:80274

REFERENCE 8: 124:52190

REFERENCE 9: 123:247554

REFERENCE 10: 123:179356

L114 ANSWER 12 OF 26 REGISTRY COPYRIGHT 2003 ACS
RN **86102-31-0** REGISTRY
CN **Proteinase inhibitor, TIMP (9CI)** (CA INDEX NAME)
OTHER NAMES:
CN **Metalloproteinase elastase inhibitor**
CN TIMP
CN **TIMP metalloproteinase inhibitor**
CN **TIMP proteinase inhibitor**
CN **Tissue inhibitor of matrix metalloproteinase**
CN **Tissue inhibitor of metalloproteinase**
MF Unspecified
CI MAN
LC STN Files: ADISINSIGHT, ADISNEWS, AGRICOLA, BIOBUSINESS, BIOSIS, CA, CAPLUS, CIN, PHAR, PROMT, TOXCENTER, USPAT2, USPATFULL

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
651 REFERENCES IN FILE CA (1957 TO DATE)
21 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
652 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 139:4431

REFERENCE 2: 138:382895

REFERENCE 3: 138:382500

REFERENCE 4: 138:382301

REFERENCE 5: 138:379210

REFERENCE 6: 138:366555

REFERENCE 7: 138:366420

REFERENCE 8: 138:366416

REFERENCE 9: 138:352192

REFERENCE 10: 138:335704

L114 ANSWER 13 OF 26 REGISTRY COPYRIGHT 2003 ACS
RN **81669-70-7** REGISTRY
CN **Proteinase, metallo- (9CI)** (CA INDEX NAME)
OTHER NAMES:
CN Acidolysin
CN ATNase

CN Metalloendopeptidase
CN **Metalloendoprotease**
CN Metallopeptidase
CN **Metalloprotease**
CN **Metalloproteinase**
CN N-(2,4)-Dinitrophenylpeptidase
DR 120720-15-2, 120720-16-3, 129292-40-6, 143639-34-3
MF Unspecified
CI MAN
LC STN Files: ADISNEWS, AGRICOLA, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CAPLUS, CEN, CHEMCATS, CIN, EMBASE, PROMT, RTECS*, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
2930 REFERENCES IN FILE CA (1957 TO DATE)
32 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
2937 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 139:2891

REFERENCE 2: 139:2739

REFERENCE 3: 139:1254

REFERENCE 4: 138:406942

REFERENCE 5: 138:401744

REFERENCE 6: 138:384198

REFERENCE 7: 138:382395

REFERENCE 8: 138:379685

REFERENCE 9: 138:367572

REFERENCE 10: 138:365546

L114 ANSWER 14 OF 26 REGISTRY COPYRIGHT 2003 ACS
RN **78990-62-2** REGISTRY
CN Calpain (9CI) (CA INDEX NAME)
OTHER NAMES:
CN **Calcium-activated neutral protease**
CN **Calcium-activated neutral proteinase**
CN **Calcium-dependent neutral protease**
CN E.C. 3.4.22.17
CN **Proteinase, calcium-activated neutral**
MF Unspecified
CI MAN
LC STN Files: AGRICOLA, ANABSTR, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CAPLUS, CEN, CHEMCATS, CIN, EMBASE, IPA, PROMT, TOXCENTER, USPAT2, USPATFULL

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
2920 REFERENCES IN FILE CA (1957 TO DATE)
15 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
2921 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 139:5078

REFERENCE 2: 139:4588

REFERENCE 3: 139:2445

REFERENCE 4: 139:1963

REFERENCE 5: 139:256

REFERENCE 6: 138:400208

REFERENCE 7: 138:399225

REFERENCE 8: 138:398150

REFERENCE 9: 138:383237

REFERENCE 10: 138:382769

L114 ANSWER 15 OF 26 REGISTRY COPYRIGHT 2003 ACS
RN **78169-47-8** REGISTRY
CN **Proteinase, aspartic (9CI)** (CA INDEX NAME)
OTHER NAMES:
CN **Aspartate protease**
CN **Aspartate proteinase**
CN **Aspartic acid proteinase**
CN Aspartic endopeptidase
CN **Aspartic endoproteinase**
CN Aspartic peptidase
CN **Aspartic protease**
CN **Aspartic proteinase**
CN **Aspartyl endoproteinase**
CN **Aspartyl protease**
CN **Aspartyl proteinase**
CN **Carboxyl protease**
CN **Carboxyl proteinase**
CN GC 106
CN Novozyme 642
DR 9073-79-4, 128826-37-9, 140932-66-7
MF Unspecified
CI MAN
LC STN Files: AGRICOLA, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CAPLUS, CEN, CHEMCATS, CHEMLIST, CIN, EMBASE, PROMT, TOXCENTER, USPAT2, USPATFULL
Other Sources: EINECS**
(**Enter CHEMLIST File for up-to-date regulatory information)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
1788 REFERENCES IN FILE CA (1957 TO DATE)
44 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
1793 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 139:3103

REFERENCE 2: 139:2731

REFERENCE 3: 138:396903

REFERENCE 4: 138:378524

REFERENCE 5: 138:366953

REFERENCE 6: 138:366482

REFERENCE 7: 138:366328

REFERENCE 8: 138:366315

REFERENCE 9: 138:365546

REFERENCE 10: 138:362168

L114 ANSWER 16 OF 26 REGISTRY COPYRIGHT 2003 ACS
RN **60616-82-2** REGISTRY
CN Cathepsin L (9CI) (CA INDEX NAME)
OTHER NAMES:
CN **Aldrichina grahami cysteine proteinase**
CN Cathepsin L1
CN Cathepsin L2
CN E.C. 3.4.22.15
CN **Pacific whiting surimi wash water proteinase**
MF Unspecified
CI MAN
LC STN Files: AGRICOLA, ANABSTR, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CAPLUS, CHEMCATS, CIN, CSCHEM, EMBASE, PROMT, TOXCENTER, USPAT2, USPATFULL

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
1621 REFERENCES IN FILE CA (1957 TO DATE)
12 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
1625 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 139:4503

REFERENCE 2: 139:4272

REFERENCE 3: 139:1892

REFERENCE 4: 138:401413

REFERENCE 5: 138:400370

REFERENCE 6: 138:400356

REFERENCE 7: 138:397963

REFERENCE 8: 138:397502

REFERENCE 9: 138:383974

REFERENCE 10: 138:383054

L114 ANSWER 17 OF 26 REGISTRY COPYRIGHT 2003 ACS
RN **50936-63-5** REGISTRY
CN Trypsin inhibitor, pancreatic secretory (9CI) (CA INDEX NAME)
OTHER NAMES:
CN Kazal pancreatic secretory trypsin inhibitor
CN Kazal pancreatic trypsin inhibitor
CN Kazal trypsin inhibitor
CN Pancreas secretory trypsin inhibitor
CN Pancreatic secretory trypsin inhibitor
CN Pancreatic trypsin inhibitor (Kazal)
CN **Proteinase inhibitor SPINK1**
CN **PSTI proteinase inhibitor**
CN **Serine protease inhibitor, Kazal type 1**
MF Unspecified
CI MAN
LC STN Files: AGRICOLA, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAPLUS, CIN, EMBASE, MEDLINE, PROMT, RTECS*, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
267 REFERENCES IN FILE CA (1957 TO DATE)
20 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
267 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 138:397922

REFERENCE 2: 138:367096

REFERENCE 3: 138:352148

REFERENCE 4: 138:284721

REFERENCE 5: 138:202802

REFERENCE 6: 138:164674

REFERENCE 7: 138:120926

REFERENCE 8: 137:383188

REFERENCE 9: 137:292720

REFERENCE 10: 137:261138

L114 ANSWER 18 OF 26 REGISTRY COPYRIGHT 2003 ACS
RN **37353-41-6** REGISTRY
CN **Proteinase, cysteine (9CI)** (CA INDEX NAME)
OTHER NAMES:
CN Cysteine endopeptidase
CN **Cysteine endoprotease**
CN Cysteine peptidase
CN **Cysteine protease**
CN **Cysteine proteinase**
CN **L-Cysteine proteinase**
CN **Mercapto proteinase**
CN Oryzain
CN **Papain-like cysteine protease**
CN Sulfhydryl endopeptidase
CN Sulfhydryl esterase
CN **Sulfhydryl protease**
CN **Sulfhydryl proteinase**
CN Thiol endopeptidase
CN **Thiol endoproteinase**
CN **Thiol protease**
CN **Thiol proteinase**
CN **Thioprotease**
CN Trigger peptidase
DR 51484-59-4, 116155-86-3, 116412-41-0, 117990-23-5
MF Unspecified
CI MAN
LC STN Files: ADISNEWS, AGRICOLA, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CAPLUS, CEN, CIN, EMBASE, MEDLINE, PROMT, TOXCENTER, USPAT2, USPATFULL

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
3293 REFERENCES IN FILE CA (1957 TO DATE)
31 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
3304 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 139:6497

REFERENCE 2: 139:3376

REFERENCE 3: 139:2767

REFERENCE 4: 139:2720

REFERENCE 5: 138:400356

REFERENCE 6: 138:398013

REFERENCE 7: 138:397304

REFERENCE 8: 138:396903

REFERENCE 9: 138:396614

REFERENCE 10: 138:384249

L114 ANSWER 19 OF 26 REGISTRY COPYRIGHT 2003 ACS
RN **37259-58-8** REGISTRY
CN **Proteinase, serine (9CI)** (CA INDEX NAME)
OTHER NAMES:
CN Alcalase 3.0T
CN **Bacillus alk. serine proteinase**
CN Bactosol SI
CN Caldolase
CN Cerastobin
CN **Gene easter serine protease**
CN **Herpes simplex virus type 1 proteinase**
CN **Proteinase R**
CN **Proteinase T**
CN Proteins, gene easter
CN Proteins, gene snake
CN Prozyme 6
CN Serine endopeptidase
CN Serine esterase
CN Serine peptidase
CN **Serine protease**
CN **Serine proteinase**
CN **serine proteinase**
CN **Serine-type protease**
CN **Seryl protease**
CN Tryase
DR 139074-63-8, 116036-72-7
MF Unspecified
CI MAN
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CAPLUS, CASREACT, CEN, CHEMCATS, CHEMLIST, CIN, EMBASE, IFICDB, IFIPAT, IFIUDB, PROMT, RTECS*, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)
Other Sources: EINECS**
(**Enter CHEMLIST File for up-to-date regulatory information)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
5927 REFERENCES IN FILE CA (1957 TO DATE)
88 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
5943 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 139:8074

REFERENCE 2: 139:4192

REFERENCE 3: 139:3758

REFERENCE 4: 139:2713

REFERENCE 5: 139:1658

REFERENCE 6: 139:1640

REFERENCE 7: 139:618

REFERENCE 8: 138:406961

REFERENCE 9: 138:401756

REFERENCE 10: 138:399646

L114 ANSWER 20 OF 26 REGISTRY COPYRIGHT 2003 ACS
RN **37205-61-1** REGISTRY
CN **Proteinase inhibitor (9CI)** (CA INDEX NAME)
OTHER NAMES:
CN **Antiproteinase**
CN Fu Gu Tai
CN **Protease inhibitor**
DR 139074-30-9, 144716-05-2, 144132-75-2
MF Unspecified
CI MAN
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CAPLUS, CEN, CIN, DIOGENES, EMBASE, IFICDB, IFIPAT, IFIUDB, PROMT, TOXCENTER, USPAT2, USPATFULL

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
4840 REFERENCES IN FILE CA (1957 TO DATE)
91 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
4847 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 139:8059

REFERENCE 2: 139:5162

REFERENCE 3: 139:2886

REFERENCE 4: 139:601

REFERENCE 5: 138:401502

REFERENCE 6: 138:400414

REFERENCE 7: 138:398741

REFERENCE 8: 138:380414

REFERENCE 9: 138:379210

REFERENCE 10: 138:369171

L114 ANSWER 21 OF 26 REGISTRY COPYRIGHT 2003 ACS
RN **9041-92-3** REGISTRY
CN Trypsin inhibitor, .alpha.1- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN **.alpha.-1-Protease inhibitor**
CN **.alpha.1-Antiprotease**
CN **.alpha.1-Antiproteinase**
CN .alpha.1-Antitrypsin
CN .alpha.1-Antitrypsin Pittsburgh mutant
CN .alpha.1-Antitrypsin Portland

CN .alpha.1-AT
CN **.alpha.1-Protease inhibitor**
CN **.alpha.1-Proteinase inhibitor**
CN .alpha.1-Trypsin inhibitor
CN Antitrypsin Pittsburgh
CN Prolastin
CN Respitin
CN SERPINA1
DR 9082-50-2, 124542-00-3
MF Unspecified
CI COM, MAN
LC STN Files: ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CAPLUS, CBNB, CEN, CHEMCATS, CHEMLIST, CIN, CSCHEM, DDFU, DIOGENES, DRUGU, DRUGUPDATES, EMBASE, IFICDB, IFIPAT, IFIUDB, IPA, MRCK*, NIOSHTIC, PHAR, PROMT, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)
Other Sources: EINECS**
(**Enter CHEMLIST File for up-to-date regulatory information)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
4985 REFERENCES IN FILE CA (1957 TO DATE)
283 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
4987 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 139:4865

REFERENCE 2: 139:2771

REFERENCE 3: 138:407000

REFERENCE 4: 138:400024

REFERENCE 5: 138:399905

REFERENCE 6: 138:397166

REFERENCE 7: 138:395890

REFERENCE 8: 138:395865

REFERENCE 9: 138:390934

REFERENCE 10: 138:390629

L114 ANSWER 22 OF 26 REGISTRY COPYRIGHT 2003 ACS
RN **9040-48-6** REGISTRY
CN **Gelatinase (9CI)** (CA INDEX NAME)
OTHER NAMES:
CN **Collagenase IV**
CN **Collagenase type IV**
CN **Type IV collagen metalloproteinase**
CN **Type IV collagenase**
CN **Type IV collagenase/gelatinase**
MF Unspecified
CI MAN
LC STN Files: ADISNEWS, AGRICOLA, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CAPLUS, CHEMCATS, CIN, CSCHEM, EMBASE, PIRA, PROMT, TOXCENTER, USPAT2, USPATFULL

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
1042 REFERENCES IN FILE CA (1957 TO DATE)
11 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
1042 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 138:385438

REFERENCE 2: 138:378838

REFERENCE 3: 138:367396

REFERENCE 4: 138:348761

REFERENCE 5: 138:336376

REFERENCE 6: 138:325814

REFERENCE 7: 138:319144

REFERENCE 8: 138:300830

REFERENCE 9: 138:297627

REFERENCE 10: 138:284927

L114 ANSWER 23 OF 26 REGISTRY COPYRIGHT 2003 ACS
RN **9014-01-1** REGISTRY
CN Subtilisin (9CI) (CA INDEX NAME)
OTHER NAMES:
CN Alcalase
CN Alcalase 0.6L
CN Alcalase 2.0M
CN Alcalase 2.4L
CN Alcalase 2.5L
CN Alcalase 6.0T
CN ALK-enzyme
CN APB-72
CN Bacillopeptidase A
CN Bacillopeptidase B
CN **Bacillus subtilis alkaline proteinase**
CN **Bacillus subtilis Alkaline proteinase**
CN Bioblase SP-15 FG
CN Bioprase
CN Bioprase 30G
CN Bioprase AL 15
CN Bioprase APL 30
CN Bioprase Conc
CN Bioprase PN 4
CN Bioprase SP
CN Bioprase SP 10
CN Bioprase SP 20
CN Bioprase SP 4
CN BLAP 260
CN BLAP S
CN Chirazyme P 1
CN ChiroCLEC CRO
CN ChiroCLEC-BL
CN Colistinase
CN Dafazyme PR B
CN E.C. 3.4.21.14
CN E.C. 3.4.21.62
CN E.C. 3.4.4.16
CN Esperase
CN Esperase 8.0
CN Esperase 8.0L
CN Evertase 24 LDP
CN Extretex

CN Genenase
CN Genenase I
CN Kannase
CN Kazusase
CN **M-Protease**
CN Maxacal
CN Maxacal CX600K
CN Maxacal L
CN Maxatase
CN Nagarse
CN Necrolytin G
CN Novolan T
CN **Protease S**
CN **Protease VIII**
CN **Protease XXVII**
CN **Proteinase, Bacillus subtilis alkaline**
CN **Serine alkaline protease**
ADDITIONAL NAMES NOT AVAILABLE IN THIS FORMAT - Use FCN, FIDE, or ALL for DISPLAY
DR 12626-20-9, 12770-87-5, 9028-05-1, 9031-73-6, 9045-36-7, 9063-47-2, 9067-41-8, 2392-42-9, 148093-32-7, 179530-31-5, 196414-34-3
MF Unspecified
CI COM, MAN
LC STN Files: AGRICOLA, ANABSTR, AQUIRE, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, CSNB, DDFU, DRUGU, EMBASE, IFICDB, IFIPAT, IFIUDB, IPA, MSDS-OHS, NAPRALERT, NIOSHTIC, PROMT, RTECS*, TOXCENTER, ULIDAT, USPAT2, USPATFULL
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
5829 REFERENCES IN FILE CA (1957 TO DATE)
350 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
5838 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 139:8471

REFERENCE 2: 139:5890

REFERENCE 3: 139:5876

REFERENCE 4: 139:5870

REFERENCE 5: 139:5688

REFERENCE 6: 138:406693

REFERENCE 7: 138:406598

REFERENCE 8: 138:406597

REFERENCE 9: 138:400849

REFERENCE 10: 138:400464

L114 ANSWER 24 OF 26 REGISTRY COPYRIGHT 2003 ACS
RN **9004-06-2** REGISTRY
CN Elastase (9CI) (CA INDEX NAME)
OTHER NAMES:
CN E.C. 3.4.21.11
CN E.C. 3.4.21.36

CN E.C. 3.4.21.37
CN E.C. 3.4.24.65
CN E.C. 3.4.4.7
CN Elaszym
CN Macrophage metalloelastase
CN **Matrix metalloprotease 12**
CN **Matrix metalloproteinase-12**
CN Medullasin
CN **MMP 12**
CN Neutrophil Elastase
CN Pancreatopeptidase E
CN Peptidase, pancreato-, E
CN **Proteinase, bone marrow serine**
DR 9001-21-2, 139074-64-9, 75603-19-9, 83682-98-8
MF Unspecified
CI COM, MAN
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMLIST, CIN, CSCHEM, DDFU, DRUGU, EMBASE, IFICDB, IFIPAT, IFIUDB, IPA, MRCK*, NAPRALERT, NIOSHTIC, PHAR, PIRA, PROMT, RTECS*, TOXCENTER, USAN, USPAT2, USPATFULL
(*File contains numerically searchable property data)
Other Sources: EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
7820 REFERENCES IN FILE CA (1957 TO DATE)
259 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
7832 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 139:15273

REFERENCE 2: 139:12251

REFERENCE 3: 139:12032

REFERENCE 4: 139:5303

REFERENCE 5: 139:5124

REFERENCE 6: 139:4677

REFERENCE 7: 139:2046

REFERENCE 8: 139:1152

REFERENCE 9: 138:400336

REFERENCE 10: 138:399638

L114 ANSWER 25 OF 26 REGISTRY COPYRIGHT 2003 ACS
RN **9001-92-7** REGISTRY
CN **Proteinase (9CI)** (CA INDEX NAME)
OTHER NAMES:
CN .alpha.-N-Benzoyl-DL-arginine-p-nitroanilide hydrolase
CN **537 Acidic protease**
CN Actinase
CN Alkalase 2.4L FG
CN Alkalase 2.5L Type DX
CN **Alkaline protease-L FG**
CN ALP 901
CN Alphamalt BK 5020
CN Alphamalt LQ 4020
CN **AO protease**

CN APL 901
CN Aquatinase E
CN Arginine esterase
CN AS 1.398
CN AS 10
CN Azocaseinase
CN BAPAase
CN BAPNAase
CN Benzoyl arginine arylamidase
CN Benzoyl-DL-arginine-p-nitroanilide hydrolase
CN Bioprase SP 4FG
CN **Bioprotease A**
CN **Bioprotease N 100P**
CN Biosoft PW
CN Carbonyl hydrolase
CN Casein endopeptidase
CN Caseinase
CN Cleanase AP 100-PWC
CN Corolase 7089
CN Corolase L 10
CN DA 10
CN DA 10 (enzyme)
CN Denatyme AP
CN Deozyme
CN Durazyme 16.0L
CN Endopeptidase
CN Endopeptidase O
CN **Endoprotease**
CN **Endoproteinase**
CN Enzylase K 40
CN Enzylon SAL
CN Enzylon SAL 300
CN Enzymes, proteolytic
CN **Esteroproteinase**
CN Everlase 16L
CN Everlase 16L Type EX
CN Fibrinase
CN Flavorase
CN Flavourzyme 500 MG
CN **Fungal Protease P 31000**
CN **GHPO 525 protease**
CN **GPR protease**
CN **Growth-related proteinase**
CN **HAP Alkaline protease**
CN **Isofloridoside phosphate synthase-activating proteinase**
CN **Milk-clotting acid proteinase**
CN **Neutral proteinase 1398**
CN **Pathogenesis-related proteinase P 69**
CN **Pfu Protease S**
CN **Protease**
CN **Protease A "Amano"**
CN **Protease P3**
CN **Protease S Amano**
CN **Protease YP-SS**
CN **Protein p20 proteinase**
CN **Proteinase SP 446**
ADDITIONAL NAMES NOT AVAILABLE IN THIS FORMAT - Use FCN, FIDE, or ALL for DISPLAY
DR 9001-93-8, 9012-23-1, 9040-76-0, 125498-72-8, 125752-86-5, 123779-18-0, 124041-97-0, 120038-39-3, 120038-40-6, 105913-13-1, 118901-82-9, 144906-30-9, 143404-30-2, 143404-41-5, 80804-52-0, 116267-38-0, 117278-03-2, 117698-27-8, 118390-80-0
MF Unspecified

CI COM, MAN
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, CSNB, DDFU, DIOGENES, DRUGU, EMBASE, IFICDB, IFIPAT, IFIUDB, IPA, MSDS-OHS, NAPRALERT, NIOSHTIC, PIRA, PLASPEC*, PROMT, RTECS*, TOXCENTER, TULSA, USPAT2, USPATFULL, VTB
(*File contains numerically searchable property data)
Other Sources: EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
35317 REFERENCES IN FILE CA (1957 TO DATE)
401 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
35347 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 139:11884

REFERENCE 2: 139:6054

REFERENCE 3: 139:6027

REFERENCE 4: 139:6020

REFERENCE 5: 139:5907

REFERENCE 6: 139:5773

REFERENCE 7: 139:5769

REFERENCE 8: 139:5737

REFERENCE 9: 139:5715

REFERENCE 10: 139:5712

L114 ANSWER 26 OF 26 REGISTRY COPYRIGHT 2003 ACS
RN **9001-12-1** REGISTRY
CN **Collagenase (9CI)** (CA INDEX NAME)
OTHER NAMES:
CN Aspergillopeptidase C
CN Azocollase
CN Brachyurin
CN Clostridiopeptidase A
CN Clostridiopeptidase I
CN Clostridiopeptidase II
CN **Clostridium histolyticum collagenase**
CN Collagen peptidase
CN **Collagen protease**
CN **Collagenase A**
CN **Collagenase MMP-1**
CN E.C. 3.4.24.3
CN E.C. 3.4.24.34
CN E.C. 3.4.24.7
CN E.C. 3.4.4.19
CN E.C. 3.4.99.5
CN Euphaulysin
CN **Interstitial collagenase**
CN Iruxol
CN Kollaza
CN Liberase
CN Liberase Blendzyme IV
CN Matrix metalloprotase 1
CN **Matrix metalloprotease MMP-ABT**

CN **Matrix metalloproteinase-1**
CN **Matrix metalloproteinase-18**
CN **Matrix metalloproteinase-8**
CN **Metallocollagenase**
CN **Metalloproteinase-1**
CN **MMP-1**
CN **MMP-8**
CN Morikraz
CN Nucleolysin
CN Peptidase, clostridio-, A
CN **Proteinase, Clostridium histolyticum, A**
CN Santyl
CN Soycollagestin
DR 37288-86-1, 39433-96-0
MF Unspecified
CI COM, MAN
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMLIST, CIN, CSCHEM, DDFU, DIOGENES, DRUGU, EMBASE, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, PHAR, PIRA, PROMT, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)
Other Sources: EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
7657 REFERENCES IN FILE CA (1957 TO DATE)
73 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
7679 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 139:12251

REFERENCE 2: 139:5222

REFERENCE 3: 139:5103

REFERENCE 4: 139:4977

REFERENCE 5: 139:4843

REFERENCE 6: 139:4643

REFERENCE 7: 139:4608

REFERENCE 8: 139:4555

REFERENCE 9: 139:3900

REFERENCE 10: 139:2046

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L109 ANSWER 1 OF 49 HCAPLUS COPYRIGHT 2003 ACS
AN **2002:293975** HCAPLUS
DN **136:319344**
TI Detection of enzyme complexes in biological samples in diagnosis of tissue remodeling-associated conditions
IN **Moses, Marsha A.**; Yan, Li
PA Children's Medical Center Corporation, USA
SO PCT Int. Appl., 49 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM G01N033-574
CC 1-1 (Pharmacology)
Section cross-reference(s): 7, 14

FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002031507	A2	20020418	WO 2001-US31980	20011015
	WO 2002031507	A3	20030605		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2002011697	A5	20020422	AU 2002-11697	20011015
	US 2002081641	A1	20020627	US 2001-977878	20011015 <--
PRAI	US 2000-240489P	P	20001013		
	US 1996-639373	A	19960426 <--		
	WO 2001-US31980	W	20011015		

AB Methods and kits for diagnosing the presence of and prognosing the appearance of tissue remodeling-assocd. conditions, involving the presence of enzyme complexes in a biol. sample, are disclosed. In particular, the method pertains to diagnosing the presence of or prognosing appearance of **metastatic cancer** by the identification of high mol. wt. enzyme complexes comprising **MMPs**. Thus, **urine** of **cancer** patients contained 125-kDa complexes of **MMP**-9 with lipocalin NGAL. The complexes appear to form in the **urine**. NGAL protected **MMP**-9 from degrdn. both in vitro and in cell culture.

ST **MMP9** lipocalin NGAL complex urinalysis **cancer** diagnosis

IT Immunoassay
(**MMP9**-NGAL complex detection by; detection of enzyme complexes in biol. samples in diagnosis of tissue remodeling-assocd. conditions)

IT **Diagnosis**

(**cancer**; detection of enzyme complexes in biol. samples in diagnosis of tissue remodeling-assocd. conditions)

IT Arthritis
Bone, neoplasm
Digestive tract, neoplasm
Kidney, neoplasm
Leukemia
Liver, neoplasm
Lung, neoplasm
Mammary gland, neoplasm
Nervous system, neoplasm
Pancreas, neoplasm
Prostate gland, neoplasm
Skin, neoplasm
Urine analysis
(detection of enzyme complexes in biol. samples in diagnosis of tissue remodeling-assocd. conditions)

IT **Neoplasm**
(**diagnosis**; detection of enzyme complexes in biol. samples in **diagnosis** of tissue remodeling-assocd. conditions)

IT **Urogenital tract**
(disease, **tumor**; detection of enzyme complexes in biol. samples in diagnosis of tissue remodeling-assocd. conditions)

IT Embryo, animal
(entoderm, **cancers** derived from; detection of enzyme complexes in biol. samples in diagnosis of tissue remodeling-assocd. conditions)

IT Immunoassay
(enzyme-linked immunosorbent assay, **MMP9**-NGAL complex detection by; detection of enzyme complexes in biol. samples in diagnosis of tissue remodeling-assocd. conditions)

IT **Neoplasm**
(**epithelial**; detection of enzyme complexes in biol. samples in **diagnosis** of tissue remodeling-assocd. conditions)

IT Test kits
(for **MMP9**-NGAL complex detection; detection of enzyme complexes in biol. samples in diagnosis of tissue remodeling-assocd. conditions)

IT Caseins, biological studies
Fibronectins
Gelatins, biological studies
Vitronectin
RL: ARG (Analytical reagent use); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(in **MMP9**-NGAL complex detection by zymog.; detection of enzyme complexes in biol. samples in diagnosis of tissue remodeling-assocd. conditions)

IT Proteins
RL: ADV (Adverse effect, including toxicity); ANT (Analyte); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(lipocalin, NGAL, complexes with **MMP**'s; detection of enzyme complexes in biol. samples in diagnosis of tissue remodeling-assocd. conditions)

IT Proteins
RL: ADV (Adverse effect, including toxicity); ANT (Analyte); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(lipocalin, complexes with **MMP**'s; detection of enzyme complexes in biol. samples in diagnosis of tissue remodeling-assocd. conditions)

IT Embryo, animal
(mesoderm, **cancers** derived from; detection of enzyme

complexes in biol. samples in diagnosis of tissue remodeling-assocd. conditions)

IT Immunoassay
(radioimmunoassay, **MMP9**-NGAL complex detection by; detection of enzyme complexes in biol. samples in diagnosis of tissue remodeling-assocd. conditions)

IT **Eye**
(**retina**, **tumor**; detection of enzyme complexes in biol. samples in diagnosis of tissue remodeling-assocd. conditions)

IT Disease, animal
(tissue remodeling-assocd.; detection of enzyme complexes in biol. samples in diagnosis of tissue remodeling-assocd. conditions)

IT Collagens, biological studies
RL: ARG (Analytical reagent use); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(type IV, in **MMP9**-NGAL complex detection by zymog.; detection of enzyme complexes in biol. samples in diagnosis of tissue remodeling-assocd. conditions)

IT **86102-31-0**, TIMP **140208-24-8**, TIMP 1
RL: ADV (Adverse effect, including toxicity); ANT (Analyte); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(complexes with **MMP**'s; detection of enzyme complexes in biol. samples in diagnosis of tissue remodeling-assocd. conditions)

IT **9001-92-7D**, **Proteinase**, complexes **37259-58-8D**, Serine **proteinase**, complexes **141907-41-7D**, **Matrix metalloproteinase**, complexes **146480-36-6D**, **Matrix metalloproteinase** 9, complexes
RL: ADV (Adverse effect, including toxicity); ANT (Analyte); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(detection of enzyme complexes in biol. samples in diagnosis of tissue remodeling-assocd. conditions)

IT 9001-90-5, Plasmin 9001-91-6, Plasminogen
RL: ARG (Analytical reagent use); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(in **MMP9**-NGAL complex detection by zymog.; detection of enzyme complexes in biol. samples in diagnosis of tissue remodeling-assocd. conditions)

L109 ANSWER 2 OF 49 HCAPLUS COPYRIGHT 2003 ACS
AN 2001:763690 HCAPLUS
DN 136:52013
TI The high molecular weight urinary **matrix metalloproteinase** (**MMP**) activity is a complex of gelatinase B/**MMP**-9 and neutrophil gelatinase-associated lipocalin (NGAL). Modulation of **MMP**-9 activity by NGAL
AU Yan, Li; Borregaard, Niels; Kjeldsen, Lars; **Moses, Marsha A.**
CS Department of Surgery, Children's Hospital, Harvard Medical School, Boston, MA, 02115, USA
SO Journal of Biological Chemistry (2001), 276(40), 37258-37265
CODEN: JBCHA3; ISSN: 0021-9258
PB American Society for Biochemistry and Molecular Biology
DT Journal
LA English
CC 14-1 (Mammalian Pathological Biochemistry)
AB Detection of **matrix metalloproteinase** (**MMP**) activities in the **urine** from patients with a variety of cancers has been closely correlated to disease status. Among these activities, the presence of a group of high mol. wt. (HMW) **MMPs** independently serves as a multivariate predictor of the metastatic phenotype (1). The identity of these HMW **MMP** activities has remained unknown despite their novelty and their potentially important

applications in non-invasive cancer diagnosis and/or prognosis. Here, we report the identification of one of these HMW urinary **MMPs** of .apprx.125-kDa as being a complex of gelatinase B (**MMP**-9) and neutrophil gelatinase-assocd. lipocalin (NGAL). Multiple biochem. approaches verified this identity. Anal. using substrate gel electrophoresis demonstrated that the 125-kDa urinary **MMP** activity co-migrates with purified human neutrophil **MMP**-9.cntdot.NGAL complex. The 125-kDa urinary **MMP**-9.cntdot.NGAL complex was recognized by a purified antibody against human NGAL as well as by a monospecific antihuman **MMP**-9 antibody. Furthermore, these same two antibodies were independently capable of specifically immunopptg. the 125-kDa urinary **MMP** activity in a dose-dependent manner. In addn., the complex of **MMP**-9.cntdot.NGAL could be reconstituted in vitro by mixing **MMP**-9 and NGAL in gelatinase buffers with pH values in the range of **urine** and in normal **urine** as well. Finally, the biochem. consequences of the NGAL and **MMP**-9 interaction were investigated both in vitro using recombinant human NGAL and **MMP**-9 and in cell culture by overexpressing NGAL in human breast carcinoma cells. Our data demonstrate that NGAL is capable of protecting **MMP**-9 from degrdn. in a dose-dependent manner and thereby preserving **MMP**-9 enzymic activity. In summary, this study identifies the 125-kDa urinary gelatinase as being a complex of **MMP**-9 and NGAL and provides evidence that NGAL modulates **MMP**-9 activity by protecting it from degrdn.

ST **MMP9** lipocalin prognosis diagnosis breast cancer

IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(**MMP**-2; **urine MMP**-9-lipocalin complex in human breast cancer diagnosis and prognosis)

IT Gene, animal
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**MMP**-9; **urine MMP**-9-lipocalin complex in human breast cancer diagnosis and prognosis)

IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(TIMP; **urine MMP**-9-lipocalin complex in human breast cancer diagnosis and prognosis)

IT Diagnosis
(cancer; **urine MMP**-9-lipocalin complex in human breast cancer diagnosis and prognosis)

IT Mammary gland, neoplasm
(carcinoma; **urine MMP**-9-lipocalin complex in human breast cancer diagnosis and prognosis)

IT Proteins
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(lipocalin, neutrophil gelatinase-assocd.; **urine MMP**-9-lipocalin complex in human breast cancer diagnosis and prognosis)

IT Gene, animal
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(lipocalin; **urine MMP**-9-lipocalin complex in human breast cancer diagnosis and prognosis)

IT Human
Neutrophil
Prognosis
Tumor markers
Urine analysis
(**urine MMP**-9-lipocalin complex in human breast cancer diagnosis and prognosis)

IT **86102-31-0**, TIMP **146480-35-5**, Gelatinase A

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(**urine MMP**-9-lipocalin complex in human breast cancer diagnosis and prognosis)

IT **146480-36-6, Matrix metalloproteinase** 9
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**urine MMP**-9-lipocalin complex in human breast cancer diagnosis and prognosis)

RE.CNT 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD

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L109 ANSWER 3 OF 49 HCAPLUS COPYRIGHT 2003 ACS
AN 2000:673240 HCAPLUS
DN 134:667
TI Aldosterone modulates plasminogen activator inhibitor-1 and glomerulosclerosis in vivo
AU Brown, Nancy J.; Nakamura, Shinya; Ma, LiJun; Nakamura, Ikuko; Donnert, Ellen; **Freeman, Michael**; Vaughan, Douglas E.; Fogo, Agnes B.
CS Departments of Medicine and Pharmacology, Pathology, and Radiology, Vanderbilt University Medical Center, Nashville, TN, USA
SO Kidney International (2000), 58(3), 1219-1227
CODEN: KDYIA5; ISSN: 0085-2538
PB Blackwell Science, Inc.
DT Journal
LA English
CC 2-4 (Mammalian Hormones)
AB Aldosterone promotes nephrosclerosis in several rat models, whereas aldosterone receptor antagonism blunts the effect of activation of the renin-angiotensin-aldosterone system (RAAS) on nephrosclerosis, independent of effects on blood pressure. Based on recent findings linking activation of the RAAS with impaired fibrinolytic balance, the authors hypothesized that aldosterone induces sclerosis through effects on plasminogen activator inhibitor-1 (PAI-1), the major physiol. inhibitor of plasminogen activation. The authors examd. the effect of aldosterone antagonism on the development of sclerosis and on renal PAI-1 expression following radiation injury in the rat. Following a single dose of 12 Gy

to the kidneys, male Sprague-Dawley rats were treated with placebo, the aldosterone antagonist spironolactone (4.5 mg/day by time-release s.c. pellet), the angiotensin type 1 receptor antagonist L158-809 (AT1RA; 80 mg/L drinking water), or combined spironolactone and AT1RA. The results revealed that rats treated with placebo developed significant proteinuria and nephrosclerosis 12 wk following radiation assocd. with hypertension. Kidney PAI-1 mRNA expression was increased eightfold ($P < 0.001$ vs. nonradiated controls). Spironolactone alone had no effect on blood pressure (systolic blood pressure 149.0.+-.5.4 mm Hg) compared with placebo (151.6.+-.11.2 mm Hg, P = NS), whereas AT1RA alone (107.7.+-.8.9 mm Hg, $P = 0.013$ vs. placebo) or in combination therapy (102.1.+-.6.2 mm Hg, $P = 0.001$ vs. placebo) lowered blood pressure. Both the AT1RA and spironolactone decreased proteinuria following radiation ($P < 0.001$ vs. placebo for either drug), and the combination of AT1RA + spironolactone had a greater effect on proteinuria than spironolactone alone ($P = 0.003$). Aldosterone antagonism significantly decreased ($P = 0.016$ vs. placebo) and AT1RA virtually abolished ($P = 0.001$ vs. placebo) the development of sclerosis. Spironolactone significantly decreased PAI-1 mRNA expression in the kidneys of radiated animals (PAI-1 mRNA/GAPDH ratio 0.39.+-.0.13 vs. placebo 0.84.+-.0.05, $P = 0.006$), and there was a significant correlation between the degree of sclerosis and the level of PAI-1 immunostaining within individual rats ($R2 = 0.97$, $P < 0.0001$). In conclusion, this study is, to the authors' knowledge, the first to demonstrate that aldosterone regulates PAI-1 expression in vivo, and supports the hypothesis that aldosterone induces renal injury through its effects on PAI-1 expression.

ST aldosterone angiotensin receptor PAI1 glomerulosclerosis kidney rat

IT Angiotensin receptors
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(AT1; aldosterone modulates plasminogen activator inhibitor-1 and glomerulosclerosis in rat kidneys in vivo)

IT Blood pressure
Blood serum
Renin-angiotensin system
Urine
(aldosterone modulates plasminogen activator inhibitor-1 and glomerulosclerosis in rat kidneys in vivo)

IT Mineralocorticoid receptors
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(aldosterone modulates plasminogen activator inhibitor-1 and glomerulosclerosis in rat kidneys in vivo)

IT Kidney, disease
(glomerulosclerosis; aldosterone modulates plasminogen activator inhibitor-1 and glomerulosclerosis in rat kidneys in vivo)

IT Kidney, disease
(nephrosclerosis; aldosterone modulates plasminogen activator inhibitor-1 and glomerulosclerosis in rat kidneys in vivo)

IT Proteins, general, biological studies
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(proteinuria; aldosterone modulates plasminogen activator inhibitor-1 and glomerulosclerosis in rat kidneys in vivo)

IT **140208-23-7**, Plasminogen activator inhibitor 1
RL: BOC (Biological occurrence); BPR (Biological process); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); OCCU (Occurrence); PROC (Process)
(aldosterone modulates plasminogen activator inhibitor-1 and glomerulosclerosis in rat kidneys in vivo)

IT 52-39-1, Aldosterone
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(aldosterone modulates plasminogen activator inhibitor-1 and glomerulosclerosis in rat kidneys in vivo)

RE.CNT 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD

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L109 ANSWER 4 OF 49 HCAPLUS COPYRIGHT 2003 ACS

AN **2000:169339** HCAPLUS

DN **132:204836**

TI Gelatinase enzyme screen for breast **cancer**

IN **Moses, Marsha A.; Freeman, Michael R.; Wiederschain, Dmitri**

PA The Children's Medical Center Corp., USA

SO U.S., 14 pp., Cont.-in-part of U.S. Ser. No. 639,373.
CODEN: USXXAM

DT Patent

LA English

IC ICM C12Q001-37

NCL 435023000

CC 7-1 (Enzymes)
Section cross-reference(s): 14

FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6037138	A	20000314	US 1997-843095	19970425 <--
	CA 2252648	AA	19971106	CA 1997-2252648	19970425 <--

US 2002081641 A1 20020627 US 2001-977878 20011015 <--
PRAI US 1996-639373 A2 19960426 <--
US 2000-240489P P 20001013

AB Methods and kits for diagnosing the presence of and prognosing the appearance of tissue remodelling-assocd. conditions, involving the presence of enzymes in a biol. sample, are disclosed. In particular, the method pertains to diagnosing the presence of or prognosing appearance of **cancer, metastatic cancer**, and obstructive and degenerative conditions. In the claims, a gelatinase is detected in **urine** for facilitating the diagnosis of breast **cancer**. A gelatinase of about 125 kDa was detected in the **urine** of 5 out of 9 specimens obtained from **metastatic** breast **cancer** patients. Gelatinase of this size was not obsd. in **urine** samples of other subjects.

ST gelatinase enzyme breast **cancer** diagnosis

IT Caseins, biological studies
Gelatins, biological studies
Vitronectin
RL: ARG (Analytical reagent use); DEV (Device component use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(as zymogram substrate; gelatinase enzyme screen for breast **cancer**)

IT **Prostate gland**
(**benign hyperplasia**; gelatinase enzyme screen for breast **cancer**)

IT Immunoassay
(enzyme-linked immunosorbent assay; gelatinase enzyme screen for breast **cancer**)

IT Electrophoresis
Immunoassay
Neoplasm
Polyacrylamide gel electrophoresis
Statistical analysis
Urine analysis
(gelatinase enzyme screen for breast **cancer**)

IT **Neoplasm**
(**metastasis**; gelatinase enzyme screen for breast **cancer**)

IT **Mammary gland**
(**neoplasm, metastasis**; gelatinase enzyme screen for breast **cancer**)

IT **Mammary gland**
Prostate gland
(**neoplasm**; gelatinase enzyme screen for breast **cancer**)

IT Immunoassay
(radioimmunoassay; gelatinase enzyme screen for breast **cancer**)

IT Collagens, biological studies
RL: ARG (Analytical reagent use); DEV (Device component use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(type IV, as zymogram substrate; gelatinase enzyme screen for breast **cancer**)

IT **9040-48-6**, Gelatinase
RL: ANT (Analyte); BAC (Biological activity or effector, except adverse); BOC (Biological occurrence); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); OCCU (Occurrence); USES (Uses)
(125,000-mol.-wt.; gelatinase enzyme screen for breast **cancer**)

IT 9001-90-5, Plasmin 9001-91-6, Plasminogen

RL: ARG (Analytical reagent use); DEV (Device component use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(as zymogram substrate; gelatinase enzyme screen for breast **cancer**)

IT **141907-41-7, Matrix metalloproteinase**
146480-35-5, Gelatinase A **146480-36-6**, Gelatinase B
RL: ANT (Analyte); BAC (Biological activity or effector, except adverse); BOC (Biological occurrence); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); OCCU (Occurrence); USES (Uses)
(gelatinase enzyme screen for breast **cancer**)

IT **119345-31-2**, Progelatinase
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(gelatinase enzyme screen for breast **cancer**)

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE
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(2) Anon; WO 9111714 1991 HCAPLUS
(3) Anon; EP 0685557 1995 HCAPLUS
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(5) Wright; US 5639656 1997 HCAPLUS
(6) Zucker; US 5324634 1994 HCAPLUS

L109 ANSWER 5 OF 49 HCAPLUS COPYRIGHT 2003 ACS
AN 1999:672012 HCAPLUS
DN 131:318276
TI Regulation of angiostatin production by **matrix metalloproteinase**-2 in a model of concomitant resistance
AU O'Reilly, Michael S.; **Wiederschain, Dmitri**; Stetler-Stevenson, William G.; Folkman, Judah; **Moses, Marsha A.**
CS Laboratory of Surgical Research, Department of Surgery, The Children's Hospital, Boston, MA, 02115, USA
SO Journal of Biological Chemistry (1999), 274(41), 29568-29571
CODEN: JBCHA3; ISSN: 0021-9258
PB American Society for Biochemistry and Molecular Biology
DT Journal
LA English
CC 2-10 (Mammalian Hormones)
AB The authors have previously reported the identification of the endogenous angiogenesis inhibitor angiostatin, a specific inhibitor of endothelial cell proliferation in vitro and angiogenesis in vivo. In the authors' original studies, the authors demonstrated that a Lewis lung carcinoma (LLC-LM) primary tumor could suppress the growth of its metastases by generating angiostatin. Angiostatin, a 38-kDa internal fragment of plasminogen, was purified from the serum and **urine** of mice bearing LLC-LM, and its discovery provides the first proven mechanism for concomitant resistance. Subsequently, the authors have shown that systemic administration of angiostatin can regress a wide variety of malignant tumors in vivo. However, at the time of the authors' initial discovery of angiostatin, the source of the protein was unclear. The authors hypothesized that the tumor or stromal cells might produce an enzyme that could cleave plasminogen sequestered by the primary tumor into angiostatin. Alternatively, the authors speculated that the tumor cells might express angiostatin. By Northern anal., however, the authors have found no evidence that the tumor cells express angiostatin or other fragments of plasminogen (data not shown). The authors now report that gelatinase A (**matrix metalloproteinase**-2), produced directly by the LLC-LM cells, is responsible for the prodn. of angiostatin, which suppresses the growth of metastases in the authors' original model.
ST angiostatin **matrix metalloproteinase** plasminogen

IT Blood vessel
(endothelium; regulation of angiostatin prodn. from plasminogen by **matrix metalloproteinase**-2 in a model of concomitant resistance)
IT Proliferation inhibition
(regulation of angiostatin prodn. from plasminogen by **matrix metalloproteinase**-2 in a model of concomitant resistance)
IT **146480-35-5**, Gelatinase A
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(regulation of angiostatin prodn. from plasminogen by **matrix metalloproteinase**-2 in a model of concomitant resistance)
IT 86090-08-6P, Angiostatin
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); MFM (Metabolic formation); PUR (Purification or recovery); BIOL (Biological study); FORM (Formation, nonpreparative); PREP (Preparation)
(regulation of angiostatin prodn. from plasminogen by **matrix metalloproteinase**-2 in a model of concomitant resistance)
IT 9001-91-6, Plasminogen
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(regulation of angiostatin prodn. from plasminogen by **matrix metalloproteinase**-2 in a model of concomitant resistance)
RE.CNT 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
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L109 ANSWER 6 OF 49 HCAPLUS COPYRIGHT 2003 ACS
AN 1998:223704 HCAPLUS
DN 129:2334
TI Increased incidence of **matrix metalloproteinases** in **urine** of cancer patients
AU **Moses, Marsha A.**; **Wiederschain, Dmitri**; Loughlin, Kevin R.; Zurakowski, David; Lamb, Carolyn C.; **Freeman, Michael R.**

CS Laboratory for Surgical Research, Children's Hospital, Boston, MA, 02115, USA
SO Cancer Research (1998), 58(7), 1395-1399
CODEN: CNREA8; ISSN: 0008-5472
PB American Association for Cancer Research
DT Journal
LA English
CC 9-7 (Biochemical Methods)
Section cross-reference(s): 14
AB **Matrix metalloproteinases** (**MMPs**) have been implicated in mechanisms of metastasis in exptl. cancer models and in human malignancies. In this study, we used substrate gel electrophoresis (zymog.) to det. the frequency of detection of **MMPs** in **urine** of patients with a variety of cancers. Three mol. wt. classes of urinary **MMPs**, Mr 72,000, Mr 92,000, and high mol. wt. (Mr .gtoreq. 15,000) species, were detected reproducibly and correlated with disease status. The Mr 72,000 and Mr 92,000 species were identified as **MMP**-2 and **MMP**-9, resp., by Western blot anal. The presence of biol. active **MMP**-2 ($P < 0.001$) or **MMP**-9 ($P = 0.002$) was an independent predictor of organ-confined cancer, and the high mol. wt. species ($P < 0.001$) was an independent predictor of metastatic cancer. This is the first study to demonstrate that anal. of urinary **MMPs** may be useful in detg. disease status in a variety of human cancers, both within and outside of the urinary tract.
ST **urine matrix metalloproteinase** detn gel electrophoresis
IT Gel electrophoresis
Neoplasm
Urine analysis
(increased incidence of **matrix metalloproteinases** in **urine** of cancer patients)
IT **141907-41-7, Matrix metalloproteinase**
146480-35-5, MMP 2 **146480-36-6, MMP** 9
RL: ANT (Analyte); ANST (Analytical study)
(increased incidence of **matrix metalloproteinases** in **urine** of cancer patients)
RE.CNT 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
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L109 ANSWER 7 OF 49 HCAPLUS COPYRIGHT 2003 ACS
AN **1998:102243** HCAPLUS

DN **128:241227**
TI Fluorescence labeling of thiol **proteinase** inhibitors extracted from **urine** of colorectal **cancer** patients
AU Gutowicz, Jan; Michalak, Krystyna; Pola, Andrzej; Berdowska, Izabela; Siewinski, Maciej
CS Department of Biophysics, Wroclaw University of Medicine, Wroclaw, 50-368, Pol.
SO Current Topics in Biophysics (**1996**), 20(2), 144-148
CODEN: CTOBEU; ISSN: 1232-9630
PB Wydawnictwo Protext
DT Journal
LA English
CC 7-5 (Enzymes)
Section cross-reference(s): 14
AB Role of cysteine endopeptidases in **carcinogenesis** is a well-documented fact. These enzymes are esp. important in penetration processes of **tumor** cells which lead to **metastasis**. In a no. of studies in vitro and in vivo, it has been shown that the activity of the peptidases can be regulated by specific protein inhibitors and activators. Levels of the inhibitors and the activators in an organism are likely related to activation of self-defense mechanisms. In many cases enhanced level of the inhibitors has been obsd. in body fluids of **cancer** patients. In this work a method of fluorescence labeling of the inhibitors isolated from **urine** of patients with colorectal **cancer** was evaluated. The reaction of o-phthaldialdehyde with protein amino groups was used for the labeling procedure. The reaction results in prodn. of highly fluorescent isoindole derivs. of the proteins. Efficient energy transfer between native protein fluorophores and the incorporated probe was proved. This allows monitoring of conformational changes upon intermol. interactions. The labeling by o-phthaldialdehyde was compared with the labeling with fluorescamine. Fluorescence labeling of the inhibitors gives new possibilities in investigation of the mechanisms of cysteine peptidase inhibition.
ST fluorescence labeling thiol **proteinase** inhibitor **urine** ; colorectal **cancer urine proteinase** inhibitor labeling; **proteinase** inhibitor fluorescence conformation **urine cancer**
IT Intestine, **neoplasm**
(colorectal; fluorescence labeling of thiol **proteinase** inhibitors from **urine** of colorectal **cancer** patients for monitoring conformational changes)
IT **Urine**
(fluorescence labeling of thiol **proteinase** inhibitors from **urine** of colorectal **cancer** patients for monitoring conformational changes)
IT Conformation
(protein; fluorescence labeling of thiol **proteinase** inhibitors from **urine** of colorectal **cancer** patients for monitoring conformational changes)
IT **138674-34-7**, Thiol **proteinase** inhibitor
RL: BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study); PROC (Process)
(fluorescence labeling of thiol **proteinase** inhibitors from **urine** of colorectal **cancer** patients for monitoring conformational changes)
IT 643-79-8, o-Phthaldialdehyde
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(fluorescence labeling of thiol **proteinase** inhibitors from **urine** of colorectal **cancer** patients for monitoring conformational changes)
RE.CNT 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE
(1) Baici, A; Invasion Metastasis 1988, V8, P143 HCAPLUS
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L109 ANSWER 8 OF 49 HCAPLUS COPYRIGHT 2003 ACS
AN **1997:740385** HCAPLUS
DN **128:1455**
TI Non-invasive enzyme screen for tissue remodeling-associated conditions
IN **Moses, Marsha A.**; **Freeman, Michael R.**; **Wiederschain, Dmitri**
PA Children's Medical Center Corporation, USA; Moses, Marsha A.; Freeman, Michael R.; Wiederschain, Dmitri
SO PCT Int. Appl., 43 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM G01N033-574
ICS G01N033-564; G01N033-573
CC 7-1 (Enzymes)
Section cross-reference(s): 14

FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9741441	A1	19971106	WO 1997-US6909	19970425 <--
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	CA 2252648	AA	19971106	CA 1997-2252648	19970425 <--
	AU 9726819	A1	19971119	AU 1997-26819	19970425 <--
	EP 900381	A1	19990310	EP 1997-918808	19970425 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	JP 2000510949	T2	20000822	JP 1997-539033	19970425 <--
	US 2002081641	A1	20020627	US 2001-977878	20011015 <--
PRAI	US 1996-639373	A2	19960426 <--		
	WO 1997-US6909	W	19970425		
	US 2000-240489P	P	20001013		

AB Methods and kits for diagnosing the presence of and prognosing the appearance of tissue remodeling-assocd. conditions, involving the presence of enzymes in a biol. sample, are disclosed. In particular, the method pertains to diagnosing the presence of or prognosing appearance of **cancer, metastatic cancer**, and obstructive and degenerative conditions.

ST noninvasive enzyme screen tissue
IT Enzymes, biological studies
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(Matrix-digesting; non-invasive enzyme screen for tissue remodeling-assocd. conditions)
IT **Prostate gland**
(**benign hyperplasia**; non-invasive enzyme screen for tissue remodeling-assocd. conditions)
IT **Urogenital tract**
(**cancer**; non-invasive enzyme screen for tissue remodeling-assocd. conditions)
IT Immunoassay
(enzyme-linked immunosorbent assay; non-invasive enzyme screen for tissue remodeling-assocd. conditions)
IT **Neoplasm**
(**metastasis**; non-invasive enzyme screen for tissue remodeling-assocd. conditions)
IT **Digestive tract**
Mammary gland
Nervous system
Prostate gland
(**neoplasm**; non-invasive enzyme screen for tissue remodeling-assocd. conditions)
IT **Diagnosis**
Immunoassay
Kidney, neoplasm
Liver, neoplasm
Lung, neoplasm
Neoplasm
Pancreas, neoplasm
Skin, neoplasm
Urine analysis
(non-invasive enzyme screen for tissue remodeling-assocd. conditions)
IT Enzymes, biological studies
Zymogens
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(non-invasive enzyme screen for tissue remodeling-assocd. conditions)
IT Caseins, uses
Fibronectins
Gelatins, uses
Vitronectin
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(non-invasive enzyme screen for tissue remodeling-assocd. conditions)
IT Immunoassay
(radioimmunoassay; non-invasive enzyme screen for tissue remodeling-assocd. conditions)
IT **Eye**
(**retina, cancer**; non-invasive enzyme screen for tissue remodeling-assocd. conditions)
IT Collagens, uses
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(type IV; non-invasive enzyme screen for tissue remodeling-assocd. conditions)
IT **9001-92-7, Protease 9040-48-6**, Type IV collagenase **37259-58-8**, Serine **protease 141907-41-7, Matrix metalloproteinase**
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(non-invasive enzyme screen for tissue remodeling-assocd. conditions)
IT 9001-90-5, Plasmin 9001-91-6, Plasminogen
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)

(non-invasive enzyme screen for tissue remodeling-assocd. conditions)

L109 ANSWER 9 OF 49 HCAPLUS COPYRIGHT 2003 ACS
AN **1997:125141** HCAPLUS
DN **126:194959**
TI Urinary excretion of proteolyzed .alpha.1-antitrypsin: specificity, quantitation, and relation to therapy response in patients with acute myeloid leukemia
AU Dengler, Robert; Plewan, Andreas; Muenstermann, Ursula; Busch, Raymonde; Eger, Gerhard; Emmerich, Bertold
CS Med. Klinik Innenstadt, Univ. Munchen, Munich, 80336, Germany
SO Clinical Cancer Research (**1995**), 1(2), 199-205
CODEN: CCREF4; ISSN: 1078-0432
PB American Association for Cancer Research
DT Journal
LA English
CC 1-6 (Pharmacology)
AB During remission induction chemotherapy, a 41-kDa cleavage product of .alpha.1-antitrypsin (.alpha.1-AT41) can be found in the **urine** of patients with acute myeloid leukemia. By using immunoblotting with antibodies against this protein, 27 patients with acute myeloid leukemia were screened for the excretion of this fragment and the amt. of .alpha.1-AT41 compared with treatment response assessed by therapy-induced cytoredn. in the bone marrow and time to reach remission. Patients with acute lymphoblastic leukemia, **malignant** lymphomas, and solid **tumors** receiving chemotherapy, patients with **nonmalignant** diseases like sepsis and kidney dysfunction, and healthy subjects were probed to evaluate the specificity of this phenomenon. In 74% of the acute myeloid leukemia patients, the truncated inhibitor was detected. Mean concn. of peak excretion was found to be 6.7 .mu.g/mg creatinine (range, 1.1-41 .mu.g/mg). Among the patients treated with induction chemotherapy, those who responded completely (<5% residual marrow blast cells) exhibited significantly higher .alpha.1-AT41 concns. than the nonresponders ($P < 0.03$). Patients who showed a partial response (6-25% residual blasts) excreted intermediate values of the protein. The probability of median time to reach remission was 40 days in patients excreting the truncated inhibitor in measurable amts. compared to 100 days in patients neg. for .alpha.1-AT41 ($P < 0.02$). The 41-kDa fragment was also found in one of 10 patients with acute lymphoblastic leukemia and in 3 of 18 lymphoma patients but not in those with solid **tumors**, infections, or kidney disease or in healthy individuals.
ST antitrypsin antileukemic
IT **Antitumor** agents
(leukemia; urinary excretion of proteolyzed .alpha.1-antitrypsin and therapy response in humans with acute myeloid leukemia)
IT **9041-92-3**, .alpha.1-Antitrypsin
RL: ADV (Adverse effect, including toxicity); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(urinary excretion of proteolyzed .alpha.1-antitrypsin and therapy response in humans with acute myeloid leukemia)

L109 ANSWER 10 OF 49 HCAPLUS COPYRIGHT 2003 ACS
AN **1997:52365** HCAPLUS
DN **126:129971**
TI The value of **urine** cysteine **proteinase** and serum CA125 measurement in monitoring the treatment of **malignant** ovarian **tumor**
AU Gao, Guolan; Peng, Zhilan; He, Bin; Huang, Jianmin
CS Dep. Obstetrics Gynecol., Second Affiliated Hosp., West China Univ. Med. Scis., Chengdu, 610041, Peop. Rep. China
SO Huaxi Yike Daxue Xuebao (**1996**), 27(3), 291-294
CODEN: HYDXET; ISSN: 0257-7712

PB Huaxi Yike Daxue
DT Journal
LA Chinese
CC 14-1 (Mammalian Pathological Biochemistry)
AB **Urine** cysteine **proteinase** (UCP) and serum CA125 were measured in 40 patients with **malignant** ovarian **tumor** (**malignant** group), 40 patients with benign ovarian **tumor** (benign group), and 40 normal control (normal group). 28 Patients in the **malignant** group underwent UCP and CA125 measurement pre-operation, post-operation, and during three course of chemotherapy. The enzyme activity of UCP in the **malignant** group was significantly higher than that in the benign and normal groups (or 0.01). The values of UCP in patients with **malignant tumor** of stages II-IV were significantly higher compared with those of stages I-II (0.05). The activity of UCP and CA125 value were gradually decreased with chemotherapy.
ST cysteine **proteinase** CA125 antigen ovary **cancer**
IT **Ovary, neoplasm**
(**carcinoma; urine** cysteine **proteinase** and serum CA125 measurement in monitoring treatment of **malignant** ovarian **tumor**)

IT Blood serum
Ovary, neoplasm
Prognosis
Tumor markers
Urine
(**urine** cysteine **proteinase** and serum CA125 measurement in monitoring treatment of **malignant** ovarian **tumor**)

IT CA 125 (carbohydrate antigen)
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)
(**urine** cysteine **proteinase** and serum CA125 measurement in monitoring treatment of **malignant** ovarian **tumor**)

IT **37353-41-6**, Cysteine **proteinase**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**urine** cysteine **proteinase** and serum CA125 measurement in monitoring treatment of **malignant** ovarian **tumor**)

L109 ANSWER 11 OF 49 HCAPLUS COPYRIGHT 2003 ACS
AN **1996:516550** HCAPLUS
DN **125:162765**
TI Monoclonal antibody to tissue inhibitor of **metalloproteinase**-1 (TIMP-1) for diagnosis of urinary system **cancer**
IN Kuroda, Kazuhiko; Kato, Masatoshi
PA Morinaga & Co, Japan
SO Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G01N033-574
ICS G01N033-493; G01N033-573
CC 9-10 (Biochemical Methods)
Section cross-reference(s): 14, 15

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 08136548	A2	19960531	JP 1994-301616	19941111 <--
PRAI	JP 1994-301616		19941111 <--		

AB Urinary TIMP-1 is detd. by immunoassay with monoclonal anti-TIMP-1 antibody. Urinary TIMP-1 is used as an indicator for diagnosis of urinary tract **cancer** such as bladder **cancer**, kidney **cancer**, or ureter **cancer**.

ST tissue inhibitor of **metalloproteinase** 1 antibody; monoclonal antibody TIMP1 urinary system **cancer**

IT **Kidney, neoplasm**
Urine analysis
(monoclonal antibody to tissue inhibitor of **metalloproteinase** -1 or TIMP-1 for diagnosis of urinary system **cancer**)

IT Antibodies
RL: ARG (Analytical reagent use); BPN (Biosynthetic preparation); PUR (Purification or recovery); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(monoclonal, monoclonal antibody to tissue inhibitor of **metalloproteinase**-1 or TIMP-1 for diagnosis of urinary system **cancer**)

IT **Bladder**
Urinary tract
(**neoplasm**, monoclonal antibody to tissue inhibitor of **metalloproteinase**-1 or TIMP-1 for diagnosis of urinary system **cancer**)

IT **140208-24-8**, Tissue inhibitor of **metalloproteinase**-1
RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(monoclonal antibody to tissue inhibitor of **metalloproteinase** -1 or TIMP-1 for diagnosis of urinary system **cancer**)

L109 ANSWER 12 OF 49 HCAPLUS COPYRIGHT 2003 ACS
AN **1996:494700** HCAPLUS
DN **125:162734**
TI Methods for detection of an analyte
IN Bogart, Gregory R.; Moddel, Garret R.; Maul, Diana M.; Etter, Jeffrey B.; Crosby, Mark
PA Biostar, Inc., USA
SO U.S., 71 pp., Cont.-in-part of U.S. Ser. No. 924343,abandoned.
CODEN: USXXAM
DT Patent
LA English
IC ICM C12Q001-70
ICS G01N033-53; G01N033-543; G01N021-00
NCL 435005000
CC 9-1 (Biochemical Methods)
Section cross-reference(s): 3, 7, 15, 73
FAN.CNT 14

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5541057	A	19960730	US 1993-75952	19930610 <--
	AU 9179004	A1	19921021	AU 1991-79004	19910320 <--
	AU 653940	B2	19941020		
	EP 539383	A1	19930505	EP 1991-910056	19910320 <--
	EP 539383	B1	19960918		
	R: BE, CH, DE, ES, FR, GB, IT, LI, LU, NL, SE				
	JP 05506936	T2	19931007	JP 1991-509344	19910320 <--
	JP 3193373	B2	20010730		
	ES 2094224	T3	19970116	ES 1991-910056	19910320 <--
	JP 2001235473	A2	20010831	JP 2000-287242	19910320 <--
	EP 1126278	A2	20010822	EP 2001-108521	19930610 <--
	EP 1126278	A3	20011017		
	R: ES, FR, GB, IT, SE				
	JP 2002116208	A2	20020419	JP 2001-236186	19930610 <--
	JP 2002122601	A2	20020426	JP 2001-236166	19930610 <--
	JP 2002122603	A2	20020426	JP 2001-236198	19930610 <--

	JP 2002139498	A2	20020517	JP 2001-236144	19930610 <--
	US 5639671	A	19970617	US 1995-412600	19950328 <--
	US 5629214	A	19970513	US 1995-456040	19950531 <--
	US 5869272	A	19990209	US 1995-455652	19950531 <--
	JP 10288616	A2	19981027	JP 1998-5911	19980114 <--
	JP 2951300	B2	19990920		
PRAI	US 1989-408291	B2	19890918 <--		
	US 1992-873097	B2	19920424 <--		
	US 1992-924343	B2	19920731 <--		
	JP 1990-513789	A3	19900918 <--		
	EP 1991-910056	A	19910320 <--		
	JP 1991-509344	A3	19910320 <--		
	WO 1991-US1781	A	19910320 <--		
	US 1992-923048	B2	19920731 <--		
	EP 1993-915341	A3	19930610 <--		
	JP 1994-505280	A3	19930610 <--		
	US 1993-75952	A3	19930610 <--		
	US 1993-76319	B1	19930610 <--		

AB This invention relates to devices that produce a detectable attenuation of the spectral characteristic of light impinging on the devices by thin-film phenomena. Interference phenomena are central to the devices and methods of the invention. The presence or amt. of an analyte of interest (e.g., rheumatoid factor, viral antigens, Streptococcus Group A antigen, allergens, HIV I or II, etc.) in a sample (e.g., blood, **urine**, spinal fluid, gastric wash, vaginal secretions, etc.) is found by using a substrate having an optically active surface exhibiting a first color in response to light impinging thereon and exhibiting a second color comprising a combination of wavelengths of light different from the first color or comprising an intensity of at least one wavelength of light different from the first color in response to the light when the analyte is present on the surface. Then the optically active surface is contacted with a sample potentially comprising the analyte of interest under conditions in which the analyte can interact with the optically active surface to cause the optically active surface to exhibit the second color when the analyte is present. The devices permit detection of extremely small quantities of analyte in a sample, in amts. as low as 0.1 nM; 0.1 ng/mL, 50 fg, or 2 .times. 103 organisms in a rapid assay that lasts only a few minutes.

ST optically active surface app biochem analysis; interference film optical app biochem analysis; thin film analyzer body fluid; bacteria detection body fluid app; virus detection body fluid app; antigen detection body fluid app; antibody detection body fluid app

IT Bacteria
Blood analysis
Body fluid
Cerebrospinal fluid
Chlamydia
Ellipsometers
Escherichia coli
Feces
Films
Immunoassay
Infrared radiation
Interference
Latex
Light
Neisseria meningitidis
Optical detectors
Pericardium
Peritoneum
Pharynx
Pleura
Reflectometers

Respiratory tract
Saliva
Sputum
Stomach
Streptococcus pneumoniae
Ultraviolet radiation
Urine analysis
(app. and methods for anal. using thin-film phenomena)

IT Enzymes
RL: ANT (Analyte); ANST (Analytical study)
(app. and methods for anal. using thin-film phenomena)

IT Antibodies
RL: ANT (Analyte); ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(app. and methods for anal. using thin-film phenomena)

IT Allergens
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(app. and methods for anal. using thin-film phenomena)

IT Antigens
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(app. and methods for anal. using thin-film phenomena)

IT Autoimmune disease
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(app. and methods for anal. using thin-film phenomena)

IT Lipopolysaccharides
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(app. and methods for anal. using thin-film phenomena)

IT Microorganism
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(app. and methods for anal. using thin-film phenomena)

IT **Neoplasm**
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(app. and methods for anal. using thin-film phenomena)

IT Rheumatoid factors
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(app. and methods for anal. using thin-film phenomena)

IT Virus
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(app. and methods for anal. using thin-film phenomena)

IT Siloxanes and Silicones, analysis
RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST (Analytical study); USES (Uses)
(app. and methods for anal. using thin-film phenomena)

IT Collagens, biological studies
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(app. and methods for anal. using thin-film phenomena)

IT Immunoglobulins
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(peroxidase conjugates; app. and methods for anal. using thin-film phenomena)

IT Vagina
(secretions; app. and methods for anal. using thin-film phenomena)

IT **Antigens**
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL

(Biological study); USES (Uses)
(**CEA** (**carcinoembryonic antigen**), app. and methods for anal. using thin-film phenomena)

IT Immunoglobulins
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(E, app. and methods for anal. using thin-film phenomena)

IT Proteins, specific or class
RL: ANT (Analyte); ANST (Analytical study)
(OMP (outer membrane protein), app. and methods for anal. using thin-film phenomena)

IT Intestine
(colon, app. and methods for anal. using thin-film phenomena)

IT Glycoproteins, specific or class
RL: ANT (Analyte); ANST (Analytical study)
(gp41, fusion products, app. and methods for anal. using thin-film phenomena)

IT Streptococcus
(group A, app. and methods for anal. using thin-film phenomena)

IT Streptococcus
(group B, app. and methods for anal. using thin-film phenomena)

IT Virus, animal
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(hepatitis A, app. and methods for anal. using thin-film phenomena)

IT Virus, animal
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(hepatitis B, app. and methods for anal. using thin-film phenomena)

IT Virus, animal
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(hepatitis C, app. and methods for anal. using thin-film phenomena)

IT Virus, animal
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(hepatitis D, app. and methods for anal. using thin-film phenomena)

IT Virus, animal
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(hepatitis E, app. and methods for anal. using thin-film phenomena)

IT Virus, animal
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(human immunodeficiency 1, app. and methods for anal. using thin-film phenomena)

IT Virus, animal
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(human immunodeficiency 2, app. and methods for anal. using thin-film phenomena)

IT Proteins, specific or class
RL: ANT (Analyte); ANST (Analytical study)
(p24, fusion products, app. and methods for anal. using thin-film phenomena)

IT Virus, animal
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(respiratory syncytial, app. and methods for anal. using thin-film phenomena)

IT Glass, oxide
RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST (Analytical study); USES (Uses)

(sodium borosilicate, app. and methods for anal. using thin-film phenomena)
IT Haemophilus influenzae
(type b, app. and methods for anal. using thin-film phenomena)
IT 25550-58-7, Dinitrophenol
RL: ANT (Analyte); ANST (Analytical study)
(app. and methods for anal. using thin-film phenomena)
IT **9001-12-1**, Collagenase 9003-99-0, Peroxidase
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(app. and methods for anal. using thin-film phenomena)
IT 75-78-5 919-30-2, 3-Aminopropyltriethoxysilane 1760-24-3 6843-66-9 7429-90-5, Aluminum, analysis 7440-21-3, Silicon, analysis 7440-47-3, Chromium, analysis 9002-98-6, Polyethylenimine 9003-17-2D, Polybutadiene, triethoxysilyl-modified 9003-53-6, Polystyrene 11105-01-4, Silicon oxynitride 12033-89-5, Silicon nitride, analysis 13463-67-7, Titanium dioxide, analysis 31001-77-1 144856-48-4, TC7A 163442-68-0, Starburst 5th Generation 176499-37-9 180208-74-6
RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST (Analytical study); USES (Uses)
(app. and methods for anal. using thin-film phenomena)

L109 ANSWER 13 OF 49 HCAPLUS COPYRIGHT 2003 ACS
AN **1995:447366** HCAPLUS
DN **122:210885**
TI Analysis of prostatic fluid: Evidence for the presence of a prospective marker for prostatic **cancer**
AU Grover, Phulwinder K.; Resnick, Martin I.
CS School Medicine, Case Western Reserve University, Cleveland, OH, USA
SO Prostate (New York, NY, United States) (**1995**), 26(1), 12-18
CODEN: PRSTDS; ISSN: 0270-4137
DT Journal
LA English
CC 14-1 (Mammalian Pathological Biochemistry)
AB In an endeavor to identify marker(s) for prostatic **cancer**, proteins in prostatic fluids were analyzed by two-dimensional (2-D) gel electrophoresis. The fluids were obtained from five males who had no prostate lesions and five patients each with benign prostatic hyperplasia (BPH) and prostatic **carcinoma** (PCA). The specimens were collected directly over a mixt. of **protease** inhibitors and centrifuged, and the supernatants were lyophilized and solubilized in sodium dodecyl sulfate mix. Identical amts. of proteins were pooled according to donors' prostate disease and the resulting samples were subjected to 2-D gel anal. employing the ISO-DALT system. The electrophoretograms were developed by silver or double stain. The samples of each group exhibited distinctive profiles with the exception of similar relative positions of major protein spots. A predominant protein occurring as several charge variants was consistently present in prostatic fluids of patients with PCA. This protein appeared to be a previously unknown constituent that we have called protein D (mol. wt. .apprx.22 kDa and isoelec. point .apprx.4), and was undetectable in the fluids of "normal" men and patients with BPH. An anal. of pooled, unprocessed **urine** from PCA patients revealed that perhaps this protein is excreted in **urine** in very low quantities. These results strongly suggest that the potential of this protein as a marker for prostatic **cancer** should be further explored.
ST prostate **carcinoma** protein marker
IT Proteins, specific or class
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)
(22,000-mol.-wt., protein D isolation and occurrence in human prostatic fluid as marker for prostate **carcinoma**)
IT Proteins, specific or class

RL: BOC (Biological occurrence); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)
(D, protein D isolation and occurrence in human prostatic fluid as marker for prostate **carcinoma**)

IT **Prostate gland**
(**disease, benign hyperplasia**, protein D isolation and occurrence in human prostatic fluid as marker for prostate **carcinoma**)

IT **Prostate gland**
(**neoplasm, carcinoma**, protein D isolation and occurrence in human prostatic fluid as marker for prostate **carcinoma**)

L109 ANSWER 14 OF 49 HCAPLUS COPYRIGHT 2003 ACS
AN **1995:440495** HCAPLUS
DN **122:259298**
TI Electrophoretic analysis of a gastric **cancer**-associated acid **proteinase** using a highly sensitive detection system
AU Aoki, Takashi; Takasaki, Tomoko; Morikawa, Junji; Yano, Takashi; Watabe, Hiroyuki
CS Faculty of Pharmaceutical Sciences, Health Sciences University of Hokkaido, Hokkaido, 061-02, Japan
SO Biological & Pharmaceutical Bulletin (**1994**), 17(10), 1358-63
CODEN: BPBLEO; ISSN: 0918-6158
PB Pharmaceutical Society of Japan
DT Journal
LA English
CC 7-1 (Enzymes)
Section cross-reference(s): 14
AB A highly sensitive detection system for acid **proteinase** sepd. on polyacrylamide gel was established. This system consisted of two-dimensional electrophoresis, combined with isoelec. focusing and polyacrylamide gel electrophoresis, and casein clotting (caseogram). Human **urine**, serum and gastric tissues obtained from normal individuals and gastric **cancer** patients were analyzed using this system. The previous electrophoretic method was not sufficiently sensitive to detect small amts. of pepsinogen (PG) C in normal **urine**. However, the new rapid and sensitive method clearly revealed its presence. In gastric tissue contg. **cancer** cells, an addnl. **proteinase**, which was not present in normal tissue, was detected and named medium-moving **proteinase** (**MMP**). **MMP** resembled PGs in alk. stability rather than the non-PG **proteinase**, slow-moving **proteinase** (SMP).
ST gastric **cancer** assocd acid **proteinase** detn
IT Blood analysis
Neoplasm
Stomach, **neoplasm**
Urine analysis
(electrophoretic anal. of a gastric **cancer**-assocd. acid **proteinase** using a highly sensitive detection system)

IT 61536-72-9, Pepsinogen C
RL: ANT (Analyte); ANST (Analytical study)
(electrophoretic anal. of a gastric **cancer**-assocd. acid **proteinase** using a highly sensitive detection system)

IT **9001-92-7, Proteinase**
RL: ANT (Analyte); BOC (Biological occurrence); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); OCCU (Occurrence)
(gastric **cancer**-assocd. medium-moving; electrophoretic anal. of a gastric **cancer**-assocd. acid **proteinase** using a highly sensitive detection system)

L109 ANSWER 15 OF 49 HCAPLUS COPYRIGHT 2003 ACS
AN **1995:438213** HCAPLUS
DN **122:178377**
TI Inhibition of **tumors** by suppressing activity of inhibitors of **proteases** or nonproteolytic matrix-degrading enzymes
IN Brunner, Nils; Roemer, John; Ellis, Vincent; Pyke, Charles; Groendahl-Hansen, Jan; Pedersen, Helle; Hansen, Heine Hoei; Danoe, Keld
PA Cancerforskningsfondet af 1989, Den.
SO PCT Int. Appl., 93 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM A61K038-00
ICS A61K038-49; A61K039-395; G01N033-574; G01N033-573
CC 1-6 (Pharmacology)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9502413	A1	19950126	WO 1994-DK288	19940718 <--
	W: AM, AU, BB, BG, BR, BY, CA, CN, CZ, CZ, DE, DK, FI, FI, GE, HU, JP, KE, KG, KP, KR, KZ, LK, LT, LV, MD, MG, MN, MW, NO, NZ, PL, RO, RU, SD, SI, SK, SK, TJ, TT, UA, US, UZ, VN				
	RW: KE, MW, SD, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	AU 9471833	A1	19950213	AU 1994-71833	19940718 <--
	EP 712312	A1	19960522	EP 1994-920904	19940718 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	JP 10500097	T2	19980106	JP 1994-504300	19940718 <--
	US 6224865	B1	20010501	US 1996-583129	19960515 <--
	US 2001034327	A1	20011025	US 2001-836323	20010418 <--
	US 2003096755	A1	20030522	US 2003-336513	20030102 <--
PRAI	DK 1993-851	A	19930716 <--		
	WO 1994-DK288	W	19940718 <--		
	US 1996-583129	A3	19960515 <--		
	US 2001-836323	B1	20010418		

AB Methods are disclosed for inhibiting **malignant tumor** growth, invasion, and/or **metastasis** in a patient, the methods comprising suppressing the inhibitory activity of an inhibitor of a **protease** or of a nonproteolytic matrix-degrading enzyme (IPNME) in **malignant tumor** tissue or potential **malignant tumor** tissue. The suppression may be brought about administering compds. interacting with the IPNME, but also administration of compds. interacting with transcription of genes encoding the IPNME is a possibility. Also disclosed are methods of selecting and identifying compds. in the therapeutic methods, as well as the use of such compds. in the treatment of **malignancies**. 12The prognostic value of PAI-1 (plasminogen activator inhibitor type 1) in bronchogenic **adenocarcinoma** is described, as is use of neutralizing monoclonal anti-PAI-1 antibodies to inhibit formation of **metastasis** of a human breast **cancer** xenograft in nude mice.
ST **protease** inhibitor suppression **tumor** treatment; **antitumor** matrix degrading enzyme inhibitor suppression
IT Cytotoxic agents
(conjugates with PAI-1-binding compds.; **tumor** inhibition by suppression of inhibitor of **protease** or nonproteolytic matrix-degrading enzyme)
IT Blood vessel
(formation; **tumor** inhibition by suppression of inhibitor of **protease** or nonproteolytic matrix-degrading enzyme)
IT **Lung, neoplasm**
(in situ hybridization for PAI-1 mRNA and immunostaining of PAI-1 protein in human lung **cancer**)
IT Ribonucleic acids, messenger

RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
(in situ hybridization for PAI-1 mRNA and immunostaining of PAI-1 protein in human lung **cancer**)

IT Receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(**proteinase**; screening assay in relation to **tumor** inhibition by suppression of inhibitor of **protease** or nonproteolytic matrix-degrading enzyme)

IT Blood analysis
Urine analysis
(screening assay in relation to **tumor** inhibition by suppression of inhibitor of **protease** or nonproteolytic matrix-degrading enzyme)

IT **Neoplasm**
(tissue; screening assay in relation to **tumor** inhibition by suppression of inhibitor of **protease** or nonproteolytic matrix-degrading enzyme)

IT Antibodies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(to PAI-1; **tumor** inhibition by suppression of inhibitor of **protease** or nonproteolytic matrix-degrading enzyme)

IT Gene, animal
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(transformed stromal cells in **tumor** inhibition by suppression of inhibitor of **protease** or nonproteolytic matrix-degrading enzyme)

IT Extracellular matrix
Fibroblast
Leukocyte
Macrophage
Neoplasm inhibitors
(**tumor** inhibition by suppression of inhibitor of **protease** or nonproteolytic matrix-degrading enzyme)

IT **Neoplasm** inhibitors
(bladder **carcinoma**, **tumor** inhibition by suppression of inhibitor of **protease** or nonproteolytic matrix-degrading enzyme)

IT **Neoplasm** inhibitors
(brain, **tumor** inhibition by suppression of inhibitor of **protease** or nonproteolytic matrix-degrading enzyme)

IT **Neoplasm** inhibitors
(**carcinoma**, **tumor** inhibition by suppression of inhibitor of **protease** or nonproteolytic matrix-degrading enzyme)

IT **Ovary, neoplasm**
(**carcinoma**, inhibitors, **tumor** inhibition by suppression of inhibitor of **protease** or nonproteolytic matrix-degrading enzyme)

IT **Uterus, neoplasm**
(cervix, **carcinoma**, inhibitors, **tumor** inhibition by suppression of inhibitor of **protease** or nonproteolytic matrix-degrading enzyme)

IT **Neoplasm** inhibitors
(colon **adenocarcinoma**, **tumor** inhibition by suppression of inhibitor of **protease** or nonproteolytic matrix-degrading enzyme)

IT Intestine, **neoplasm**
(colon, **adenocarcinoma**, inhibitors, **tumor** inhibition by suppression of inhibitor of **protease** or nonproteolytic matrix-degrading enzyme)

IT **Neoplasm** inhibitors
(digestive tract, **tumor** inhibition by suppression of

inhibitor of **protease** or nonproteolytic matrix-degrading enzyme)

IT Blood vessel
(endothelium, **tumor** inhibition by suppression of inhibitor of **protease** or nonproteolytic matrix-degrading enzyme)

IT Enzymes
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(extracellular matrix-degrading, nonproteolytic; **tumor** inhibition by suppression of inhibitor of **protease** or nonproteolytic matrix-degrading enzyme)

IT **Neoplasm** inhibitors
(female reproductive tract **carcinoma**, **tumor** inhibition by suppression of inhibitor of **protease** or nonproteolytic matrix-degrading enzyme)

IT **Reproductive tract**
(female, **neoplasm**, **carcinoma**, inhibitors, **tumor** inhibition by suppression of inhibitor of **protease** or nonproteolytic matrix-degrading enzyme)

IT **Neoplasm** inhibitors
(genitourinary tract, **tumor** inhibition by suppression of inhibitor of **protease** or nonproteolytic matrix-degrading enzyme)

IT **Neoplasm** inhibitors
(hematol., **tumor** inhibition by suppression of inhibitor of **protease** or nonproteolytic matrix-degrading enzyme)

IT **Brain, neoplasm**
Skin, neoplasm
Stomach, **neoplasm**
(inhibitors, **tumor** inhibition by suppression of inhibitor of **protease** or nonproteolytic matrix-degrading enzyme)

IT **Neoplasm** inhibitors
(lung non-small-cell **carcinoma**, **tumor** inhibition by suppression of inhibitor of **protease** or nonproteolytic matrix-degrading enzyme)

IT **Neoplasm** inhibitors
(lymphoma, **tumor** inhibition by suppression of inhibitor of **protease** or nonproteolytic matrix-degrading enzyme)

IT **Neoplasm** inhibitors
(mammary gland, **tumor** inhibition by suppression of inhibitor of **protease** or nonproteolytic matrix-degrading enzyme)

IT **Neoplasm** inhibitors
(**melanoma**, **tumor** inhibition by suppression of inhibitor of **protease** or nonproteolytic matrix-degrading enzyme)

IT **Neoplasm** inhibitors
(**metastasis**, **tumor** inhibition by suppression of inhibitor of **protease** or nonproteolytic matrix-degrading enzyme)

IT Antibodies
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(monoclonal, neutralizing, to PAI-1; **tumor** inhibition by suppression of inhibitor of **protease** or nonproteolytic matrix-degrading enzyme)

IT **Bladder**
Prostate gland
(**neoplasm**, **carcinoma**, inhibitors, **tumor** inhibition by suppression of inhibitor of **protease** or nonproteolytic matrix-degrading enzyme)

IT **Digestive tract**
Genitourinary tract

Mammary gland
(**neoplasm**, inhibitors, **ppression** of inhibitor of **protease** or nonproteolytic **matrix**-degrading enzymeex **Genitourinary tract**,)

IT Bronchi
(**neoplasms**, **adenocarcinoma**, PAI-1 prognostic value in bronchogenic **adenocarcinoma**)

IT **Lung, neoplasm**
(**non-small-cell carcinoma**, inhibitors, **tumor** inhibition by suppression of inhibitor of **protease** or nonproteolytic matrix-degrading enzyme)

IT **Neoplasm** inhibitors
(ovary **carcinoma**, **tumor** inhibition by suppression of inhibitor of **protease** or nonproteolytic matrix-degrading enzyme)

IT **Neoplasm** inhibitors
(prostate gland **carcinoma**, **tumor** inhibition by suppression of inhibitor of **protease** or nonproteolytic matrix-degrading enzyme)

IT **Neoplasm** inhibitors
(**sarcoma**, **tumor** inhibition by suppression of inhibitor of **protease** or nonproteolytic matrix-degrading enzyme)

IT **Neoplasm** inhibitors
(skin, **tumor** inhibition by suppression of inhibitor of **protease** or nonproteolytic matrix-degrading enzyme)

IT **Neoplasm** inhibitors
(skin squamous-cell **carcinoma**, **tumor** inhibition by suppression of inhibitor of **protease** or nonproteolytic matrix-degrading enzyme)

IT **Skin, neoplasm**
(**squamous-cell carcinoma**, inhibitors, **tumor** inhibition by suppression of inhibitor of **protease** or nonproteolytic matrix-degrading enzyme)

IT **Neoplasm** inhibitors
(stomach, **tumor** inhibition by suppression of inhibitor of **protease** or nonproteolytic matrix-degrading enzyme)

IT Organ
(stroma, transformed stromal cells in **tumor** inhibition by suppression of inhibitor of **protease** or nonproteolytic matrix-degrading enzyme)

IT Receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(urokinase-type plasminogen activator, screening assay in relation to **tumor** inhibition by suppression of inhibitor of **protease** or nonproteolytic matrix-degrading enzyme)

IT **Neoplasm** inhibitors
(uterus cervix **carcinoma**, **tumor** inhibition by suppression of inhibitor of **protease** or nonproteolytic matrix-degrading enzyme)

IT Animal growth regulators
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(vitronectins, inhibition of PAI-1 binding to vitronectin in relation to **tumor** inhibition by suppression of inhibitor of **protease** or nonproteolytic matrix-degrading enzyme)

IT **9001-92-7, Proteinase**
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(receptors; screening assay in relation to **tumor** inhibition by suppression of inhibitor of **protease** or nonproteolytic matrix-degrading enzyme)

IT 9001-90-5, Plasmin 9001-91-6, Plasminogen 9025-26-7, Cathepsin D
9039-53-6, Urokinase-type plasminogen activator **37205-61-1**,

Proteinase inhibitor **37259-58-8**, Serine **protease**
37353-41-6, Cysteine **protease 78169-47-8**,
Aspartic **protease 81669-70-7**, **Metalloprotease**
89800-66-8, Heparanase **124861-55-8**, TIMP-2 **140208-23-7**
, PAI-1 **140208-24-8 142243-03-6**, PAI-2
148196-69-4, **Protease** nexin-1
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL
(Biological study); PROC (Process)
(**tumor** inhibition by suppression of inhibitor of
protease or nonproteolytic **matrix**-degrading enzyme)
IT 9039-53-6D, Urokinase-type plasminogen activator, derivs. and variants
82657-92-9D, Pro-urokinase-type plasminogen activator, derivs. and
variants
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**tumor** inhibition by suppression of inhibitor of
protease or nonproteolytic matrix-degrading enzyme)

L109 ANSWER 16 OF 49 HCAPLUS COPYRIGHT 2003 ACS
AN **1995:412954** HCAPLUS
DN **122:155762**
TI Method of sample preparation for **urine** protein analysis with
capillary electrophoresis
IN Liu, Cheng-Ming; Wang, Hann-Ping
PA Beckman Instruments, Inc., USA
SO PCT Int. Appl., 40 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM G01N033-483
ICS G01N033-493; G01N030-14; G01N027-447
CC 9-16 (Biochemical Methods)
Section cross-reference(s): 13, 14

FAN.CNT 1					
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	WO 9502182	A1	19950119	WO 1994-US5631	19940518 <--
	W: CA, JP				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	EP 659274	A1	19950628	EP 1994-921199	19940518 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	CA 2143206	AA	19960119	CA 1994-2143206	19940518 <--
	JP 08501638	T2	19960220	JP 1994-504023	19940518 <--
PRAI	US 1993-91844		19930709 <--		
	WO 1994-US5631		19940518 <--		

AB Processes are provided for pretreating body fluid (e.g., **urine**)
compns. and subsequently analyzing the pretreated body fluid compns. for
analytes of interest esp. in clin. disease diagnosis. Processes for
pretreating the compns. include providing a size exclusion gel having a
mol. wt. fractionation range or a mol. wt. exclusion such that the size
exclusion gel is capable of excluding or fractionating the analytes of
interest and then causing the compn. to contact the size exclusion gel to
sep. the analytes from low-mol.-wt. compn. components which interfere with
the sepn. and anal. of the analytes of interest. Processes for analyzing
pretreated compns. include electrophoretic methods such as capillary zone
electrophoresis which involve the sepn. and detection of analytes of
interest. Examples are given of the detn. of proteins in the
urine of patients with myeloma and kidney disease.
ST **urine** protein detn gel chromatog electrophoresis; disease
diagnosis protein detn **urine** pretreatment
IT Chromatography, gel
Diagnosis
Disease
Kidney, disease

Myeloma
Urine analysis
(proteins detn. in **urine** in disease by gel chromatog. and capillary electrophoresis)

IT Albumins, analysis
Haptoglobins
Immunoglobulins
Proteins, analysis
Transferrins
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(proteins detn. in **urine** in disease by gel chromatog. and capillary electrophoresis)

IT Polysaccharides, biological studies
RL: NUU (Other use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(proteins detn. in **urine** in disease by gel chromatog. and capillary electrophoresis)

IT Immunoglobulins
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(Bence-Jones, proteins detn. in **urine** in disease by gel chromatog. and capillary electrophoresis)

IT Proteins, biological studies
RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)
(metabolic disorders, proteinuria, proteins detn. in **urine** in disease by gel chromatog. and capillary electrophoresis)

IT Electrophoresis and Ionophoresis
(zone, capillary, proteins detn. in **urine** in disease by gel chromatog. and capillary electrophoresis)

IT Macroglobulins
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(.alpha.2-, proteins detn. in **urine** in disease by gel chromatog. and capillary electrophoresis)

IT Globulins, analysis
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(.gamma.-, proteins detn. in **urine** in disease by gel chromatog. and capillary electrophoresis)

IT 9035-81-8, Trypsin inhibitor **9041-92-3**, .alpha.1-Antitrypsin
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(proteins detn. in **urine** in disease by gel chromatog. and capillary electrophoresis)

IT 9003-05-8, Polyacrylamide 9004-54-0, Dextran, biological studies
RL: NUU (Other use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(proteins detn. in **urine** in disease by gel chromatog. and capillary electrophoresis)

L109 ANSWER 17 OF 49 HCAPLUS COPYRIGHT 2003 ACS
AN **1994:573952** HCAPLUS
DN **121:173952**
TI Maspin, a novel serpin with **tumor** suppressing activity and the gene encoding it
IN Sager, Ruth
PA Dana-Farber Cancer Institute, Inc., USA
SO PCT Int. Appl., 67 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM C12Q001-00

ICS G01N033-48; G01N033-50; C12N005-00; C12N015-00; A61K039-00; A61K037-00; C07H021-04
CC 7-3 (Enzymes)
Section cross-reference(s): 1, 9
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9405804	A1	19940317	WO 1993-US8322	19930901 <--
	W: CA, JP				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	EP 662150	A1	19950712	EP 1993-921337	19930901 <--
	EP 662150	B1	20021218		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	JP 08500977	T2	19960206	JP 1993-507469	19930901 <--
	AT 229983	E	20030115	AT 1993-921337	19930901 <--
PRAI	US 1992-938823	A	19920901 <--		
	WO 1993-US8322	W	19930901 <--		

AB A novel serpin called maspin that is present in normal mammary epithelial tissues and absent from primary **carcinomas** is identified and a cDNA encoding it is cloned. The gene is therefore considered a **tumor** suppressor gene. The cDNA and antibodies to the enzyme are useful diagnostic and therapeutic agents.
ST maspin serpin cDNA **tumor** suppressor gene
IT Gene, animal
RL: BIOL (Biological study)
(cDNA, for serine **proteinase** inhibitor maspin, cloning of)
IT Saliva
Semen
Tear
(detn. of maspin in, in diagnosis of **cancer**)
IT Nucleic acid hybridization
(for diagnosis of breast **cancer**, detection of maspin gene or mRNA in)
IT Blood analysis
Urine analysis
(for levels of maspin, in diagnosis of **cancer**)
IT Immunoassay
(for marpin in mammary gland epithelium, in diagnosis of **cancer**)
IT Epithelium
(maspin gene and transcript in, detection of, in diagnosis of **cancer**)
IT Genetic mapping
(of human maspin gene to chromosome 18q21.3)
IT Protein sequences
(of maspin of human)
IT **Neoplasm** inhibitors
(screening of, detn. of effects on maspin levels in **tumor** cells for)
IT Antibodies
RL: BIOL (Biological study)
(to maspin, **cancer** diagnosis and treatment in relation to)
IT Gene, animal
RL: BIOL (Biological study)
(anti-onco-, gene for serine **proteinase** inhibitor maspin as, in mammary epithelium)
IT Deoxyribonucleic acid sequences
(complementary, for maspin of human)
IT Mammary gland
(epithelium, maspin gene and transcript in, detection of, in diagnosis of **cancer**)
IT Therapeutics
(geno-, for **tumors**, increasing level of maspin gene

expression in)
IT Milk
(human, detn. of maspin in, in diagnosis of **cancer**)
IT Chromosome
(human 18, maspin gene mapping to 18q21.3 of)
IT **Mammary gland**
(**neoplasm**, diagnosis and treatment of, marpin gene in)
IT 153572-12-4, Maspin (human clone Z32-1 reduced)
RL: BIOL (Biological study)
(amino acid sequence of and cloning of cDNA for)
IT **157857-21-1**, Serine **proteinase** inhibitor maspin
RL: BIOL (Biological study)
(cDNA for, cloning of, **tumor** suppression properties of)
IT 156621-27-1
RL: BIOL (Biological study)
(nucleotide sequence and cloning of of cDNA for)

L109 ANSWER 18 OF 49 HCAPLUS COPYRIGHT 2003 ACS
AN **1994:25968** HCAPLUS
DN **120:25968**
TI Pepsinogens in health and disease
AU Plebani, M.
CS Dep. Lab. Med., Univ. Hosp., Padua, Italy
SO Critical Reviews in Clinical Laboratory Sciences (**1993**), 30(3), 273-328
CODEN: CRCLBH; ISSN: 1040-8363
DT Journal; General Review
LA English
CC 7-0 (Enzymes)
Section cross-reference(s): 14
AB A review with 291 refs.focused on pepsinogens. The recommended classification and nomenclature of the aspartic **proteinases** is described and their genetics, biochem. and physiol. is discussed. A detailed review of the methods for the measurement of pepsinogens in serum, **urine**, and gastric mucosa is provided. Data on pepsinogen levels in healthy subjects are discussed with respect to sex, age, smoking habit, and the presence of circadian rhythm. The value of pepsinogen measurement in peptic ulcer to det. ulcer outcome and recurrence, in gastric **cancer**, and in Helicobacter pylori infection is reviewed. Finally, the effects of drugs on peptic secretion are discussed. In light of these data, the measurement aspartic **proteinases**, and in particular that of pepsinogen A and C, may be regarded as an effective biochem. approach to the evaluation and monitoring of patients with upper gastrointestinal diseases.
ST review pepsinogen aspartic **proteinase** gastrointestinal disease
IT Digestive tract
(upper, disease, pepsinogen A and C and other aspartic **proteinases** in evaluation and monitoring of)
IT 9001-10-9, Pepsinogen
RL: BIOL (Biological study)
(multiple forms, detn. and properties of, upper gastrointestinal diseases evaluation and monitoring in relation to)
IT **78169-47-8**, Aspartic **proteinase**
RL: BIOL (Biological study)
(nomenclature and biochem. and physiol. of, upper gastrointestinal diseases in relation to)

L109 ANSWER 19 OF 49 HCAPLUS COPYRIGHT 2003 ACS
AN **1993:662079** HCAPLUS
DN **119:262079**
TI Decrease in vivo of cysteine endopeptidases in blood of patients with **tumor** of the larynx
AU Mikulewicz, Wojciech; Berdowska, Izabela; Jarmulowicz, Jerzy; Siewinski,

Maciej
CS ENT Dep., Reg. Hosp., Wroclaw, 51-124, Pol.
SO Anti-Cancer Drugs (**1993**), 4(3), 341-4
CODEN: ANTDEV; ISSN: 0959-4973
DT Journal
LA English
CC 1-6 (Pharmacology)
AB Since cysteine endopeptidase (cathepsins B and L) have been proposed to be implicated in **tumor malignancy**, the authors have attempted to decrease these in vivo. Large amts. of **urine** cysteine peptidase inhibitors (UCPI) are present in the **urine** of patients. The authors' results indicate protective effects of a UCPI prepn. against human serum cysteine endopeptidases.
ST cysteine endopeptidase inhibitor **urine** larynx **cancer**
IT Blood serum
(cystine endopeptidase of, of human with larynx **cancer**, **urine** cystine peptidase inhibitors effect on)
IT **Neoplasm** inhibitors
(larynx, **urine** cystine peptidase inhibitors as, in human)
IT Larynx
(**neoplasm**, cystine endopeptidases of blood serum in, in human, **urine** cystine peptidsase inhibitors effect on)
IT 9031-96-3, Peptidase
RL: BIOL (Biological study)
(inhibitory cystine-targeted of **urine**, of human with larynx **cancer**, blood serum cystine endopeptidases response to)
IT 9047-22-7, Cathepsin B **60616-82-2**, Cathepsin L
RL: BIOL (Biological study)
(of blood serum, of human with larynx **cancer**, urinary cystine peptidase inhibitors effect on)

L109 ANSWER 20 OF 49 HCAPLUS COPYRIGHT 2003 ACS
AN **1993:492498** HCAPLUS
DN **119:92498**
TI A study on cathepsin B-like substance in patients with urological **cancer**
AU Ueda, Mitsutaka
CS Sch. Med., Hiroshima Univ., Hiroshima, Japan
SO Nippon Hinyokika Gakkai Zasshi (**1993**), 84(2), 355-63
CODEN: NGKZA6; ISSN: 0021-5287
DT Journal
LA Japanese
CC 14-1 (Mammalian Pathological Biochemistry)
AB Cathepsin B is a lysosomal cysteine **proteinase** which is thought to regulate intracellular protein metab. In the present study, cathepsin B-like activity was detd. in the **urine** of 53 patients with renal cell **carcinoma**, 22 patients with urothelial **carcinoma** and 41 control subjects. In addn., immunohistochem. study of cathepsin B was performed in specimens obtained from 20 patients with renal cell **carcinoma**, 59 patients with bladder **carcinoma** and 20 patients with renal pelvic and ureter **carcinoma** by using sheep anti-human liver cathepsin B antibody. Cathepsin B-like activity was higher in the **urine** from patients with renal cell **carcinoma** or urothelial **carcinoma** than in that from controls. Pos. reactions for cathepsin B were found in 18 of 20 patients with renal cell **carcinoma**, in 37 of the 59 patients with bladder **carcinoma** and in 14 of the 20 patients with renal pelvic and ureter **carcinoma**. In patients with urothelial **carcinoma** high rates of pos. reaction for cathepsin B were obsd. in patients with advanced stage **tumors**, with INF.gamma.-type **tumors** and with **metastatic** lesions. In patients with renal cell **carcinoma**, there was no correlation between the rate of pos. reaction and pathol. findings. These results indicate that urinary

cathepsin B-like activity is higher in patients with urol. **cancer** and that a highly pos. reaction for cathepsin B is a risk factor for **tumor** invasion, **metastasis** and poor prognosis in patients with urothelial **carcinoma**.
ST cathepsin B diagnosis urothelial **cancer**
IT **Bladder**
(epithelium, **neoplasm**, cathepsin B-like substance as marker for, diagnosis and prognosis predictor)
IT 9047-22-7, Cathepsin B
RL: BIOL (Biological study)
(as diagnostic marker and prognosis predictor, in humans with urothelial **carcinoma**)

L109 ANSWER 21 OF 49 HCAPLUS COPYRIGHT 2003 ACS
AN **1993:121929** HCAPLUS
DN **118:121929**
TI Evaluation of metabolism of connective tissue proteins in patients with lung **cancer**
AU Mykala-Ciesla, Joanna; Gminski, Jan; Machalski, Marek; Drozdz, Marian
CS 1st Clin. Intern. Med., Silesian Med. Acad., Katowice, 40-029, Pol.
SO Acta Biochimica Polonica (**1992**), 39(1), 33-8
CODEN: ABPLAF; ISSN: 0001-527X
DT Journal
LA English
CC 14-1 (Mammalian Pathological Biochemistry)
AB The metab. of collagen and elastin was evaluated in humans with benign and **malignant** lung **neoplasms**. The levels of hydroxyproline and hydroxylysine in blood plasma and **urine** were measured. Elastase activity and elastin degrdn. peptides were detd. in blood plasma. There were some relations found between the biochem. indexes and **neoplasm malignity**.
ST lung **cancer** collagen elastin blood **urine**
IT **Lung, neoplasm**
(collagen and elastin metab. in humans with)
IT Blood plasma
(elastase and hydroxylysine and hydroxyproline of, collagen and elastin metab. in humans with lung **cancer** in relation to)
IT **Urine**
(hydroxylysine and hydroxyproline of, collagen and elastin metab. in humans with lung **cancer** in relation to)
IT Collagens, biological studies
Elastins
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(metab. of, in lung **cancer** in humans)
IT 51-35-4, Hydroxyproline 1190-94-9, Hydroxylysine
RL: BIOL (Biological study)
(of blood plasma and **urine**, collagen and elastin metab. in humans with lung **cancer** in relation to)
IT **9004-06-2**, Elastase
RL: BIOL (Biological study)
(of blood plasma, in lung **cancer** in humans)

L109 ANSWER 22 OF 49 HCAPLUS COPYRIGHT 2003 ACS
AN **1992:444079** HCAPLUS
DN **117:44079**
TI Reagents for liver disease diagnosis by immunoassay of kininogen-calpain complex in body fluids
IN Ookubo, Iwao; Sasaki, Minoru
PA Green Cross Corp., Japan
SO Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DT Patent

LA Japanese
IC ICM G01N033-53
ICS G01N033-573
CC 9-10 (Biochemical Methods)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 04110660	A2	19920413	JP 1990-230169	19900830 <--
PRAI JP 1990-230169		19900830 <--		

AB The title reagents contain an antibody to kininogen-calpain complex. Thus, kininogen-calpain complex in blood was incubated with a 1st antibody-sensitized microplate at 10-37.degree. for 0.1-5 h, incubated with peroxidase-labeled 2nd antibody, and the bound enzyme activity was spectrometrically measured for the complex detn. The method was used in the diagnosis of chronic hepatitis, cirrhosis, and liver **cancer**. The serum complex levels were 60.4, 201.7, and 121 .mu.g/mL, resp., vs 31.3 mg/mL for normal subjects.

ST serum kininogen calpain complex EIA; liver disease serum kininogen calpain complex

IT Kininogens
RL: ANST (Analytical study)
(calpain complexes, detn. of, in body fluids, by EIA, for liver disease diagnosis)

IT Cirrhosis
Liver, disease
(diagnosis of kininogen-calpain complex detn. in body fluids by EIA for)

IT Blood analysis
Body fluid
Urine analysis
(kininogen-calpain complex detn. in, by EIA, for liver disease diagnosis)

IT **Diagnosis**
(of liver diseases, kininogen-calpain complex detn. in body fluids by EIA for)

IT Antibodies
RL: ANST (Analytical study)
(to kininogen-calpain complex, for EIA for liver disease)

IT Hepatitis
(chronic, diagnosis of kininogen-calpain complex detn. in body fluids by EIA for)

IT **Liver, neoplasm**
(**hepatoma**, diagnosis of kininogen-calpain complex detn. in body fluids by EIA for)

IT Antibodies
RL: ANST (Analytical study)
(monoclonal, to kininogen-calpain complex, for EIA for liver disease)

IT **78990-62-2D**, Calpain, kininogen complexes
RL: ANT (Analyte); ANST (Analytical study)
(detn. of, in body fluids, by EIA, for liver disease diagnosis)

L109 ANSWER 23 OF 49 HCAPLUS COPYRIGHT 2003 ACS
AN **1991:550406** HCAPLUS
DN **115:150406**
TI **Tumor** necrosis factor inhibitor from **urine** for treating **tumor** necrosis factor-related diseases
IN Suzuki, Jun; Yone, Kenji; Ichikawa, Yataro
PA Teijin Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 10 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM C07K015-16

ICA A61K037-02; G01N033-50; G01N033-53
CC 1-12 (Pharmacology)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 03127800	A2	19910530	JP 1989-264887	19891013 <--
PRAI	JP 1989-264887		19891013 <--		

AB **Tumor** necrosis factor (TNF) inhibitor is isolated from **urine** of **membranoproliferative** glomerulonephritis patients and characterized. The substance inhibited the killing effect of TNF on L 929 cells, has a mol. wt. of 30,000 (gel filtration), pI of 5.7, and thermostability at 56.degree. for 60 min, and is labile to **protease**. The TNF inhibitor prepd. can be used in treating or diagnosing TNF-related diseases (no data). Thus, 1 L **urine** from the patients was subjected to ultrafiltration for concn. and chromatographed on DEAE-Sepharose CL-6B column and Protein C4 reversed-phase column to give a fraction contg. TNF inhibitor.
ST **urine tumor** necrosis favor inhibitor; therapeutic **tumor** necrosis factor inhibitor
IT **Urine**
(**tumor** necrosis factor inhibitor extn. from, of **membranoproliferative** glomerulonephritis, for therapeutic use)
IT **Kidney, disease or disorder**
(**membranoproliferative** glomerulonephritis, **tumor** necrosis factor inhibitor extn. from **urine** of, for therapeutic use)
IT Lymphokines and Cytokines
RL: BIOL (Biological study)
(**tumor** necrosis factor, inhibitor for, extn. of, from **urine** of **membranoproliferative** glomerulonephritis, for therapeutic use)

L109 ANSWER 24 OF 49 HCAPLUS COPYRIGHT 2003 ACS
AN **1991:406034** HCAPLUS
DN **115:6034**
TI **Tumor**-associated trypsin inhibitor and **tumor** -associated trypsin
AU Stenman, Ulf Hakan
CS Clin. Hormone Lab., Helsinki Univ., Helsinki, SF-00290, Finland
SO Scandinavian Journal of Clinical and Laboratory Investigation, Supplement (**1990**), 50(201), 93-101
CODEN: SCLSAH; ISSN: 0085-591X
DT Journal
LA English
CC 14-1 (Mammalian Pathological Biochemistry)
AB **Tumor**-assocd. trypsin inhibitor (TATI) is a 6-kDa peptide, which is synthesized at low concns. by several **tumors** and cell lines. Very high concns. of TATI occur in mucinous ovarian **tumors**. Elevated levels of TATI occur in serum and **urine** in connection with most types of **cancer** at advanced stages. In mucinous ovarian **cancer** up to 85 % of all cases have elevated serum levels. Because high levels also occur in early mucinous ovarian **cancer** TATI appears to be the marker of choice for this **tumor**. Elevated levels may also occur in **nonmalignant** disease, esp. in patients with severe infections, tissue destruction and pancreatitis. Prodn. of TATI in **tumors** is assocd. with expression of two new **tumor**-assocd. trypsin(ogen) (TAT) isoenzymes, TAT-1 and -2, TAT-2 being the major form. These enzymes are immunol. similar to trypsinogen-1 and -2, resp. They activate prourokinase and may therefore trigger the **tumor**-assocd. **protease** cascade contributing to the invasiveness of **malignant tumors**.
ST **tumor** assocd trypsin inhibitor **neoplasm**

IT **Neoplasm, metabolism**
(**tumor**-assocd. trypsin inhibitor and **tumor**-assocd. trypsin isoenzymes formation by human)

IT 9002-07-7, Trypsin
RL: BIOL (Biological study)
(isoenzymes and inhibitor, **tumor**-assocd., formation of, by various **neoplasms** of humans)

L109 ANSWER 25 OF 49 HCAPLUS COPYRIGHT 2003 ACS
AN **1988:524780** HCAPLUS
DN **109:124780**
TI Characterization of a **tumor**-associated serine **protease**
AU Stenman, Ulf Hakan; Koivunen, Erkki; Vuento, Matti
CS Cent. Hosp., Helsinki Univ., Helsinki, SF-00290, Finland
SO Biological Chemistry Hoppe-Seyler (**1988**), 369(Suppl.), 9-14
CODEN: BCHSEI; ISSN: 0177-3593
DT Journal
LA English
CC 7-2 (Enzymes)
Section cross-reference(s): 14
AB Previously, a **tumor**-assocd. trypsin inhibitor (TATI) was shown to be elevated in level in **urine** and serum of patients with gynecol. **cancer**. A **tumor**-assocd. **protease** reacting with TATI, called **protease** T, was found in cyst fluid from mucinous ovarian **tumors**. The **protease** occurs in complex with TATI. Its **protease** activity can be measured only after dissocn. of the complex, by reversed phase chromatog. at low pH and elution with an iso-Pr alc. gradient. **Protease** T is a serine **protease**. Its optimum activity at pH 9.1 and mol. mass of 24 kilodaltons in gel chromatog. are similar to those of trypsin but the substrate specificity is not identical and its pI is .apprx.4.0, which is lower than the corresponding values of both cationic (pI 9) and anionic trypsin (pI 5). **Protease** T could be assocd. with the elevation of TATI seen in certain **tumor** patients.
ST **protease** serum T **tumor** ovary; trypsin inhibitor **tumor** assocd serine **protease**
IT **Neoplasm, composition**
(**protease** T assocd. with, of human ovary, purifn. and properties of)
IT Pancreas, composition
(trypsin of, purifn. of and comparison with **tumor**-assocd. serine **protease** of human ovary)
IT **Ovary, neoplasm**
(cystic, **protease** T of, purifn. and properties of)
IT **37259-58-8P**
RL: PREP (Preparation)
(of **tumor** of ovary of human, purifn. and properties of)
IT 9035-81-8
RL: BIOL (Biological study)
(**tumor**-assocd., of human, **protease** T of ovary assocn. with)

L109 ANSWER 26 OF 49 HCAPLUS COPYRIGHT 2003 ACS
AN **1986:66412** HCAPLUS
DN **104:66412**
TI Pancreatic secretory trypsin inhibitor-like immunoreactivity in pancreatectomized patients
AU Halila, Hannu; Huhtala, Marja Liisa; Schroder, Tom; Kiviluoto, Tuula; Stenman, Ulf Hakan
CS Cent. Hosp., Helsinki Univ., Helsinki, SF-00290, Finland
SO Clinica Chimica Acta (**1985**), 153(3), 209-16
CODEN: CCATAR; ISSN: 0009-8981
DT Journal

LA English
CC 13-1 (Mammalian Biochemistry)
Section cross-reference(s): 14
AB Pancreatic secretory trypsin inhibitor (PSTI) is a 6000-dalton peptide that occurs in high concns. in the pancreas and in pancreatic juice. It is thought to be synthesized by pancreatic acinar cells. An identical trypsin inhibitor was previously found (Stenman, U. H., et al., 1982) at high concns. in the **urine** of patients with gynecol. **malignancy**. Therefore, the inhibitor was designated **tumor**-assocd. trypsin inhibitor (TATI). In the present work, patients who had undergone total pancreatoduodenectomy for pancreatic **cancer** or chronic pancreatitis were studied. By RIA, normal levels of this inhibitor were found in the serum and **urine** of pancreatectomized patients. The absence of pancreas was confirmed by measuring serum trypsin. By gel filtration and HPLC it was found that PSTI/TATI occurring in pancreatectomized patients was indistinguishable from that found in connection with pancreatitis and ovarian **cancer**.
ST pancreatic secretory trypsin inhibitor **urine** serum
IT **Ovary, neoplasm**
(pancreatic secretory trypsin inhibitor-like immunoreactivity of blood serum and **urine** of human in)
IT Blood serum
Urine
(pancreatic secretory trypsin inhibitor-like immunoreactivity of, of human, nonpancreatic origin of)
IT Pancreas, disease or disorder
(pancreatitis, pancreatic secretory trypsin inhibitor-like immunoreactivity of blood serum and **urine** of human in)
IT **50936-63-5**
RL: BIOL (Biological study)
(of blood serum and **urine** of humans, nonpancreatic origin of)

L109 ANSWER 27 OF 49 HCAPLUS COPYRIGHT 2003 ACS
AN **1984:566095** HCAPLUS
DN **101:166095**
TI Further purification and characterization of acid-stable **protease** inhibitor from ascites of an ovarian **carcinoma** patient
AU Akazawa, Kenji; Sumi, Hiroyuki; Maruyama, Masugi; Mihara, Hisashi
CS Dep. Physiol., Miyazaki Med. Coll., Miyazaki, 889-16, Japan
SO Clinica Chimica Acta (**1984**), 142(1), 47-60
CODEN: CCATAR; ISSN: 0009-8981
DT Journal
LA English
CC 7-2 (Enzymes)
AB An acid-stable **protease** inhibitor (AS-PI), found in ascitic fluid from patients with ovarian **carcinoma**, was purified using DEAE-cellulose and isoelec. focusing (IEF), and a partial characterization was undertaken. On DEAE-cellulose ion-exchange column chromatog., AS-PI activity was obsd. in both adsorbed (the main AS-PI peak) and nonadsorbed fractions. By IEF, the resp. pI values were 1.6 and 4.5. By gel filtration, the mol. wt. of the main peak AS-PI was 78,000. This AS-PI strongly inhibited trypsin and to a lesser extent chymotrypsin, but exerted no inhibitory effect on plasmin. It slightly inhibited SH **proteases** such as papain and ficin. Immunolog., AS-PI was distinct from .alpha.1-antitrypsin, .alpha.1-antichymotrypsin, inter-.alpha.-trypsin inhibitor, antithrombin III, C1-inactivator, .alpha.2-macroglobulin, and .alpha.2-plasmin inhibitor. The main AS-PI reacted with and was neutralized by anti-urinary trypsin inhibitor serum, and, on immunoelectrophoresis, had a mobility slightly cathodal to serum albumin.
ST acid stable **protease** inhibitor ascites ovary; **carcinoma** ovary **protease** inhibitor acid stable
IT **Carcinoma**

(ascites, acid-stable **protease** inhibitor of, of human ovary)
IT **Ovary, neoplasm**
(**carcinoma**, acid-stable **protease** inhibitor of, of human)
IT **37205-61-1P**
RL: PREP (Preparation)
(acid-stable, of ascites of ovarian **carcinoma** of human, purifn. and specificity and antigenicity of)
IT 9035-81-8
RL: BIOL (Biological study)
(of **urine**, of human, acid-stable **proteinase** inhibitor of ascites of ovarian **carcinoma** of human in relation to)

L109 ANSWER 28 OF 49 HCAPLUS COPYRIGHT 2003 ACS
AN **1984:117175** HCAPLUS
DN **100:117175**
TI Quantitation of enolase by enzyme immunoassay and its application on **cancer** diagnosis
PA Amano Pharmaceutical Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 10 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC G01N033-54; C12Q001-00
ICA C12N011-08
CC 7-1 (Enzymes)
Section cross-reference(s): 14
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 58198758	A2	19831118	JP 1982-81776	19820515 <--
JP 03008515	B4	19910206		
PRAI JP 1982-81776		19820515 <--		

AB Enolase is detd. in human body fluids by an enzyme immunoassay (EIA) which uses a solid phase contg. immobilized antibody to enolase (anti-enolase antibody) and enzyme [esp. .beta.-D-galactosidase (Gal)]-labeled anti-enolase antibody. Optionally, the **protease**-released anti-enolase antibody fragments, e.g., F(ab')2, may be used instead of the intact antibody. For detn. of enolase activity, an enolase-contg. sample is 1st reacted with the support contg. immobilized antibody, the reactant is then reacted with the Gal-labeled antibody, and the Gal bound to the support is subsequently measured to obtain enolase activity. Thus, an F(ab')2 fragment was prepd. by pepsin digestion of anti-enolase antibody obtained after immunizing rabbits with enolase from human brain. The F(ab')2 was reduced with 2-mercaptoethylamine and reacted with an excess amt. of N,N'-o-phenylenedimaleimide to form maleimide-Fab', and finally reacted with Gal to produce the Fab'-Gal complex. In another expt., F(ab')2 was immobilized on a silicon rubber support. A human enolase-contg. sample (e.g., blood serum) was reacted with the F(ab')2-contg. support and then with the Fab'-Gal complex, and the Gal bound to the support was detd. by measuring 4-methylumbelliferone formed from 4-methylumbelliferyl-.beta.-D-galactoside as substrate. Application of the EIA for serum enolase in diagnosis of lung and pancreatic **cancer** and for **urine** enolase in diagnosis of **neuroblastoma** is described.
ST enolase immunoassay **cancer** diagnosis; serum enolase detn **cancer**; **urine** enolase detn **cancer**
IT **Lung, neoplasm**
Pancreas, neoplasm
(diagnosis of, enolase detn. in blood serum of human for)
IT Blood analysis
Urine analysis

(enolase detn. in, of human, **cancer** diagnosis in relation to)

IT **Carcinoma**
(of lung and pancreas, enolase detn. in blood serum of human in diagnosis of)

IT Nerve, **neoplasm**
(**neuroblastoma**, diagnosis of, enolase detn. in **urine** of human for)

IT 9014-08-8
RL: ANT (Analyte); ANST (Analytical study)
(detn. of, of blood serum and **urine** of human, **cancer** diagnosis in relation to)

IT 9031-11-2
RL: BIOL (Biological study)
(in enolase immunoassay in blood serum and **urine** of human)

L109 ANSWER 29 OF 49 HCAPLUS COPYRIGHT 2003 ACS
AN **1983:451204** HCAPLUS
DN **99:51204**
TI Acid stable **protease** inhibitor in ascites of ovarian **carcinoma**
AU Akazawa, Kenji; Sumi, Hiroyuki; Maruyama, Masugi; Mihara, Hisashi
CS Dep. Physiol., Miyazaki Med. Coll., Miyazaki, 889-16, Japan
SO Clinica Chimica Acta (**1983**), 131(1-2), 87-99
CODEN: CCATAR; ISSN: 0009-8981
DT Journal
LA English
CC 14-1 (Mammalian Pathological Biochemistry)
AB In patients with ovarian **tumors**, a novel **protease** inhibitor which is very stable in acid (AS-PI, acid stable **protease** inhibitor) was identified in the ascites and **tumor** fluid as well as in the **urine** and plasma. The highest AS-PI activity was obsd. in the **tumor** fluid of ovarian **carcinomas** (10.7 units (U)/mL), followed by the ascites of ovarian **carcinomas** (8.2 U/mL). There was a significant difference in activity of the **tumor** fluid and ascites between **malignant** and benign **tumors** (less AS-PI activity in benign). The same antigenicity of AS-PI fractionated from ascites of ovarian **carcinomas** to urinary trypsin inhibitor was identified by double immunodiffusion and neutralization techniques. It migrated in the serum albumin fraction on immunoelectrophoresis. By gel filtration, the AS-PI in the ascites of ovarian **carcinomas** showed a mol. wt. of 70,000-80,000. Two active components with mol. wts. of 61,300 and 73,300 were detected by SDS-polyacrylamide gel electrophoresis.

ST **antiprotease** ovary **carcinoma** fluid characterization; ascites fluid **antiprotease** ovary **carcinoma**

IT **Carcinoma**
(**protease** inhibitor of ascitic and **tumor** fluid in ovarian, in human, characterization of).

IT **Ovary, neoplasm**
(**protease** inhibitor of ascitic and **tumor** fluid in, in human, characterization of)

IT Blood plasma
Urine
(**protease** inhibitor of, in ovarian **tumors** in human, characterization of)

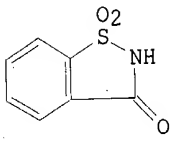
IT Ascitic fluid
(**protease** inhibitor of, of ovarian **carcinoma** in human)

IT **37205-61-1**
RL: BIOL (Biological study)
(acid-stable, of ovarian **carcinoma** ascitic and **tumor** fluid, in human, characterization of)

L109 ANSWER 30 OF 49 HCAPLUS COPYRIGHT 2003 ACS
AN **1982:595062** HCAPLUS
DN **97:195062**
TI Purification and characterization of a **tumor**-associated trypsin inhibitor from the **urine** of a patient with ovarian **cancer**
AU Huhtala, Marja Liisa; Pesonen, Kristina; Kalkkinen, Nisse; Stenman, Ulf Haakan
CS Cent. Hosp., Helsinki Univ., Helsinki, SF-00290/29, Finland
SO Journal of Biological Chemistry (**1982**), 257(22), 13713-16
CODEN: JBCHA3; ISSN: 0021-9258
DT Journal
LA English
CC 7-3 (Enzymes)
Section cross-reference(s): 14
AB Immunochem. studies on **urine** from a patient with ovarian **cancer** revealed the presence of a **tumor**-assocd. peptide. This peptide occurred in elevated concns. in the **urine** of some patients with gynecol. **cancer**, in early amniotic fluid, and in some **cancer tumor** exts. from these patients. The peptide was purified from the **urine** of a patient with ovarian **cancer** by gel chromatog., ion-exchange chromatog., and reverse-phase liq. chromatog. The amino acid compn. of the peptide was detd. The 56 amino acids corresponded to a mol. wt. of 6200 for the peptide, a value that was in agreement with the mol. wt. established by gel chromatog. The mol. contained no carbohydrate. It was microheterogeneous in charge, the isoelec. point of the main component being 5.8. The purity of the peptide was confirmed by detn. of the N-terminal amino acid sequence. The 21 residues detd. were identical with the corresponding residues of human pancreatic secretory trypsin inhibitor. The purified peptide also inhibited bovine trypsin effectively.
ST trypsin inhibitor **urine** ovarian **cancer**
IT Protein sequences
Amino acids, biological studies
RL: BIOL (Biological study)
(of trypsin inhibitor, of human **urine** during ovarian **cancer**)
IT **Carcinoma**
(ovarian, trypsin inhibitor of **urine** in, of human)
IT **Urine**
(trypsin inhibitor of, in human ovarian **cancer**)
IT **Ovary, neoplasm**
(**carcinoma**, trypsin inhibitor of **urine** in, of human)
IT **50936-63-5**
RL: BIOL (Biological study)
(in **urine**, during human ovarian **cancer**)
IT 9035-81-8P
RL: PREP (Preparation)
(of **urine**, during human ovarian **cancer**, purifn. and properties of)

L109 ANSWER 31 OF 49 HCAPLUS COPYRIGHT 2003 ACS
AN **1982:521797** HCAPLUS
DN **97:121797**
TI The inhibition of urease and **proteases** by sodium saccharin
AU Lok, Eric; Iverson, Frank; Clayson, David B.
CS Toxicol. Res. Div., Bur. Chem. Saf., Ottawa, ON, K1A 0L2, Can.
SO Cancer Letters (Shannon, Ireland) (**1982**), 16(2), 163-9
CODEN: CALEDQ; ISSN: 0304-3835
DT Journal
LA English

CC 4-6 (Toxicology)
GI



I

AB Na saccharin (I) [128-44-9], at concns. similar to those in the **urine** of rats fed 1-5% I in their diet, markedly inhibited urease [9002-13-5] and **protease** [**9001-92-7**] in vitro; Na ion did not appear to play a role in enzyme inhibition. These observations suggest that enzyme inhibition of any of a large no. of enzymes may play a role in the **tumorigenesis** of the urinary bladder by I.

ST bladder **neoplasm** saccharin urease **protease**; enzyme saccharin bladder **neoplasm**

IT **Neoplasm**
(of urinary bladder, **proteases** and urease inhibition by saccharin in relation to)

IT **Bladder**
(**neoplasm, proteases** and urease inhibition by saccharin in relation to)

IT 128-44-9
RL: BIOL (Biological study)
(enzymes inhibition by, urinary bladder **neoplasia** in relation to)

IT **9001-92-7** 9002-13-5
RL: PROC (Process)
(saccharin inhibition of, urinary bladder **neoplasia** in relation to)

L109 ANSWER 32 OF 49 HCAPLUS COPYRIGHT 2003 ACS
AN **1982:505957** HCAPLUS
DN **97:105957**
TI Radioimmunoassays of high and low molecular weight urokinase
AU Holmberg, L.; Aastedt, B.
CS Gen. Hosp., Univ. Lund, Malmo, Swed.
SO Proceedings of the Serono Symposia (**1982**), 48(Urokinase: Basic Clin. Aspects), 33-42
CODEN: PSSYDG; ISSN: 0308-5503
DT Journal
LA English
CC 7-1 (Enzymes)
Section cross-reference(s): 13, 14

AB The properties and utility of radioimmunoassays of high- and low-mol.-wt. urokinase (I) were discussed. The interfering binding to I of plasma **proteinase** inhibitors was prevented by diisopropylfluorophosphate (DFP). DFP-inactivated I was labeled with 125I via the lactoperoxidase method. Radioimmunoassay was performed with a double antibody system permitting detection of purified I at .gtoreq.0.05 nM. The assay demonstrated that fetal kidney culture I concn. was highest in the early period after explantation, and decreased with time. No I was detected in fetal **urine** or in amniotic fluid. The thyroid gland and thymus produced large amts. of I-type activators. High-mol.-wt. I was found in tissue cultures of bladder **carcinoma**. I excretion in **urine** seems to be an indicator of the no. of functioning nephrons.

ST urokinase radioimmunoassay; bladder urokinase radioimmunoassay **carcinoma**; kidney urokinase radioimmunoassay

IT Thymus gland

Thyroid gland, composition
(urokinase of)
IT Embryo
(urokinase of kidney of)
IT **Urine**
(urokinase of, in health and renal disease)
IT **Carcinoma**
(urokinase of, of bladder)
IT Kidney, composition
(urokinase of, radioimmunoassay of)
IT **Bladder**
(**neoplasm, carcinoma**, urokinase of)
IT 9039-53-6
RL: PROC (Process)
(radioimmunoassay of)

L109 ANSWER 33 OF 49 HCAPLUS COPYRIGHT 2003 ACS
AN **1978:577604** HCAPLUS
DN **89:177604**
TI **Proteases** from cultured **malignant** cells
AU Danoe, Keld; Oronsky, Arnold; Gjedde, Susanne
CS Inst. Med. Microbiol., Univ. Copenhagen, Copenhagen, Den.
SO Proceedings of the FEBS Meeting (**1978**), Volume Date 1977, 47(Regul. Proteolytic Enzymes Their Inhibitors), 113-25
CODEN: FEBPBY; ISSN: 0071-4402
DT Journal
LA English
CC 14-10 (Mammalian Pathological Biochemistry)
AB Embryonal mouse fibroblasts transformed by murine **sarcoma** virus released 5 serine **proteinases** and none of these from untransformed cells. Two other serine enzymes were released from both cell types and another one from only the untransformed cells. Two of the enzymes from the transformed cells were plasminogen activators. A serine enzyme from transformed cells was purified. Human **rhabdomyosarcoma** released 8 serine enzymes and **melanoma** 7. Four of these **rhabdomyosarcoma** enzymes and 2 from the **melanoma** were plasminogen activators. As evaluated by electrophoretic mobility, 2 of the activators from the **rhabdomyosarcoma** were identical with 2 activators from **melanoma**, while the other 2 activators from the rhabdomyosarcomaewre identical with 2 activators found in a urokinase prepn. from human **urine**. Transformed and untransformed chicken embryo fibroblasts dissolved collagen while in the growth phase. After cell confluency the untransformed cell ceased dissoln. while transformed cells continued. In the culture fluid from transformed cells a collagenolytic activity was found and it was stimulated by trypsin or plasmin. The plasmin activators are serine **proteases**.
ST **protease** cell **malignancy**
IT **Neoplasm, composition**
(**proteases** of)
IT 9001-91-6
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(activator, from **malignant** cells)
IT **37259-58-8**
RL: BIOL (Biological study)
(of **malignant** cells)

L109 ANSWER 34 OF 49 HCAPLUS COPYRIGHT 2003 ACS
AN **1978:525055** HCAPLUS
DN **89:125055**
TI A study of **proteases** and **protease**-inhibitor complexes in biological fluids
AU Granelli-Piperno, Angela; Reich, E.

CS Rockefeller Univ., New York, NY, USA
SO Journal of Experimental Medicine (**1978**), 148(1), 223-34
CODEN: JEMEAV; ISSN: 0022-1007
DT Journal
LA English
CC 7-2 (Enzymes)
AB A variety of cell lines and body fluids was screened for plasminogen activators, and the activity of **proteases** bound to .alpha.2-macroglobulin was studied after exposing the complexes to partial degrdn. and(or) denturing procedures to unmask proteolytic activity. Plasminogen activators in **urine** and cell culture media are generally of lower mol. wt. than those in plasma. **Proteases** bound to .alpha.2-macroglobulin recover the ability to attack macromol. substrates after exposure to Na dodecyl sulfate (SDS) while retaining the electrophoretic mobility of the **protease** inhibitor complex, indicating that the **protease** and inhibitor are probably linked by covalent bonds. However, other complexes formed between **proteases** and inhibitors of lower mol. wt. (such as soybean or Kunitz inhibitors) are fully dissocd. by SDS. The expts. were based on a new procedure for detecting proteolytic enzyme activity in SDS-polyacrylamide gels. The method relies on solns. of nonionic detergents for extg. SDS, after which the electrophoretic gel is applied to an indicator gel consisting of a fibrin-agar mixt. The method is sensitive, permitting the detection of **proteinases** in <1 .mu.L of fresh plasma. It is effective for resolving small differences in mol. wt. The procedure can be quantitated and was applied to a broad spectrum of serine enzymes and proenzymes, including some that function in the paths of fibrinolysis, coagulation, and kinin generation.
ST **proteinase** detection property; macroglobulin **proteinase** complex activity
IT Fibrinolysis
(enzymes in, detection and mol. wt. of, sodium dodecyl sulfate-gel electrophoresis in relation to)
IT Blood analysis
Urine analysis
(plasminogen activators detection in, mol. wt. and sodium dodecyl sulfate-gel electrophoresis in relation to)
IT Animal tissue culture
(plasminogen activators of, detection and mol. wt. of, sodium dodecyl sulfate-electrophoresis in relation to)
IT **Granuloma**
Macrophage
Melanoma
Neoplasm, composition
Sarcoma
(plasminogen activators of, detection and mol. wt. of, sodium dodecyl sulfate-gel electrophoresis in relation to)
IT Macroglobulins
RL: BIOL (Biological study)
(.alpha.2-, of blood plasma, protein complexes with, sodium dodecyl sulfate effect on activity of)
IT 9001-91-6
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(activators, detection and mol. wt. of, detergent-gel electrophoresis in)
IT 9001-90-5D, .alpha.2-macroglobulin complexes 9002-07-7D, .alpha.2-macroglobulin complexes
RL: PRP (Properties)
(activity of, sodium dodecyl sulfate effect on)
IT **9001-92-7 37259-58-8**
RL: PRP (Properties)
(detection and mol. wt. of, detergent-gel electrophoresis in)
IT 9001-26-7 9002-04-4

RL: ANT (Analyte); ANST (Analytical study)
(detection of, by detergent-gel electrophoresis)
IT 151-21-3, analysis
RL: ANST (Analytical study)
(**proteinase** and macroglobulin-**proteinase** complex
detection by electrophoresis in gels contg.)

L109 ANSWER 35 OF 49 HCAPLUS COPYRIGHT 2003 ACS
AN **1977:482760** HCAPLUS
DN **87:82760**
TI Biochemical markers in human breast **cancer**
AU Coombes, R. C.; Powles, T. J.; Gazet, J. C.; Ford, H. T.; Sloane, J. P.; Laurence, D. J. R.; Neville, A. M.
CS Unit Hum. Cancer Biol., Ludwig Inst. Cancer Res., London, UK
SO Lancet (**1977**), 1(8003), 132-4
CODEN: LANCAO; ISSN: 0140-6736.
DT Journal
LA English
CC 14-10 (Mammalian Pathological Biochemistry)
AB Nineteen biochem. parameters, most of which have been individually advocated as **tumor**-index-substances for breast **cancer**, were measured in 51 patients with breast disease, 42 of whom had active breast **cancer**. Seven of these parameters were raised in >50% of the 17 patients of the series with overt **metastases**; these were serum ferritin (88%), C-reactive protein (87%), **carcinoembryonic** antigen (81%), acid glycoprotein (75%), total alk. phosphatase (64%), sialyl transferase (56%), and the urinary hydroxyproline/creatinine ratio (73%). The incidence of biochem. abnormalities in patients in this group compared favorably with the results of phys. methods of detecting **metastases**. Seven of 16 other patients without evidence of distant **metastases**, but who had a poor prognosis as judged by histol. of the primary **tumor** and axillary lymph nodes, had abnormalities of .gtoreq.1 of the 7 parameters. Three of these patients have relapsed within a year of mastectomy. These biochem. tests could assist in monitoring **metastatic** disease and could indicate at the time of mastectomy, patients who might benefit from immediate systemic therapy in addn. to local treatment of their breast **carcinomas**.
ST breast **cancer** biochem marker; mammary gland **cancer** biochem marker
IT Blood plasma
Urine
(biochem. markers of, in **cancer** of mammary gland)
IT Ferritins
Haptoglobins
Hemopexins
Macroglobulins
RL: BIOL (Biological study)
(of blood plasma, in **cancer** of mammary gland)
IT **Cancer**
(of mammary gland, biochem. parameters of blood plasma and **urine** in)
IT Proteins
RL: BIOL (Biological study)
(C-reactive, of blood plasma, in **cancer** of mammary gland)
IT Glycoproteins
RL: BIOL (Biological study)
(acid, of blood plasma, in **cancer** of mammary gland)
IT **Mammary gland**
(**neoplasm**, biochem. markers of blood plasma and **urine** in)
IT Lactalbumins
(.alpha.-, of blood plasma, in **cancer** of mammary gland)
IT 9001-63-2 9001-78-9 9002-61-3 9007-12-9 9031-37-2

9041-92-3 9075-81-4
RL: BIOL (Biological study)
(of blood plasma, in **cancer** of mammary gland)
IT 51-35-4 60-27-5 110-60-1 124-20-9
RL: BIOL (Biological study)
(of **urine**, in **cancer** of mammary gland)

L109 ANSWER 36 OF 49 HCAPLUS COPYRIGHT 2003 ACS
AN **1965:76741** HCAPLUS
DN **62:76741**
OREF 62:13621e-f
TI Chemistry and immunology of urinary proteoses in **cancer**
AU Raventos, E. B.; Leyton, G. R.; Simon, S. H.; Contreras, E. G.; Barriga, B. R.
CS Bacteriol. Inst. Chile, Santiago
SO Acta, Unio Intern. Contra Cancrum (**1964**), 20(4-5), 1141-5
DT Journal
LA English
CC 66 (Mammalian Pathological Biochemistry)
AB Cl3CCO2H precipitability, total polypeptides, and total carbohydrates in urinary proteoses were detd. Cl3CCO2H precipitability was higher in proteoses with a higher total polypeptide concn. and the ratio of total polypeptide to total carbohydrate was increased in **cancer**.
IT **Cancer**
(**proteinases** in **urine** in)
IT **Urine**
(**proteinases** in, in **cancer**)
IT **Proteinases**
(in **urine** in **cancer**)

L109 ANSWER 37 OF 49 HCAPLUS COPYRIGHT 2003 ACS
AN **1965:76740** HCAPLUS
DN **62:76740**
OREF 62:13621d-e
TI Lactic dehydrogenase in **cancer**
AU Hall, C.; Kaplan, N. O.; Wilder, G. H.
CS Brandeis Univ., Waltham, MA
SO Acta, Unio Intern. Contra Cancrum (**1964**), 20(4-5), 1101-4
DT Journal
LA English
CC 66 (Mammalian Pathological Biochemistry)
AB Lactic dehydrogenase was more frequently elevated in **cancer** patients than was alk. phosphatase or serum glutamic-oxalacetic transaminase. It was frequently elevated longer in **cancer** than in other diseases. Elevation in serum level paralleled the extent of the disease, but since the enzyme was low or normal in earlier localized **malignancies** it was not suitable for screening populations. Height of the elevation may give a rough index to overall survival of patients. No patient with a level >500 units survived >30 days. Responses to therapy and progression of disease were frequently accompanied by falls and rises in serum levels. Nonbloody **malignant** effusions tended to have higher levels than serum drawn simultaneously. Levels in cerebral spinal fluid in the presence of intracranial **tumors** remained lower than in serum.
IT Brain
(**cancer** of, lactic dehydrogenase in blood serum and cerebrospinal fluid in)
IT **Cancer**
(lactic dehydrogenase in blood serum in)
IT Blood serum
(lactic dehydrogenase in, in **cancer**)
IT Cerebrospinal fluid
(lactic dehydrogenase in, in **cancer** of brain)

IT **Cancer**
(**proteinases** in **urine** in)
IT **Urine**
(**proteinases** in, in **cancer**)
IT 9001-60-9, Lactic dehydrogenase
(in **cancer**)

L109 ANSWER 38 OF 49 HCAPLUS COPYRIGHT 2003 ACS
AN **1962:412423** HCAPLUS
DN **57:12423**
OREF 57:2576d-e
TI New results on the determination of specific **proteinases** of **cancer** patients by means of a modified Abderhalden proteolytic 2576 enzyme reaction
AU Tetzner, E.
SO Aerztliche Laboratorium (**1962**), 8, 76-85
CODEN: AELAAH; ISSN: 0001-9526
DT Journal
LA German
CC 59 (Enzymes)
AB The Abderhalden reaction for detn. of specific **proteinases** in the blood and **urine** of **cancer** patients was modified by addn. of Trasylol which inhibited nonspecific **proteinases** and activated the **tumor**-specific **proteinases**.
IT Blood
Urine
(analysis, detn. of **proteinases**)
IT Blood
(analysis, detn. of trypsin)
IT **Cancer**
(**proteinase** detn. in blood and **urine** in)
IT Blood
Urine
(**proteinases** in, in **cancer**)
IT **Proteinases**
(detn. of, in blood and **urine** in **cancer**)

L109 ANSWER 39 OF 49 HCAPLUS COPYRIGHT 2003 ACS
AN **1962:4357** HCAPLUS
DN **56:4357**
OREF 56:835d-e
TI The problem of the enzymology of urinary **proteases** as used in the biochemical **cancer** diagnosis-the so-called Nitsche-complex reaction
AU Bayerle, Hans; EbnerPutzar, Heide; Strohm, Christoph
CS Univ., Munich, Germany
SO Aerztliche Forschung (**1961**), 15, 291-6
CODEN: ARZFAN; ISSN: 0001-9496
DT Journal
LA Unavailable
CC 71 (Mammalian Pathological Chemistry)
AB cf. preceding abstr. There is no rational theoretical basis for the Nitsche-complex reaction which uses fibrinolysis by **urine** as indication of the presence of a **carcinoma** (Nitsche, CA 47, 7571e). Fibrinolysis is not due to a **cancer**-specific enzyme but to a mixt. of various **proteases**.
IT Fibrinolysis
(by **urine** in **cancer**)
IT **Urine**
(fibrinolysis and **proteases** in, in **cancer**)
IT **Cancer**
(fibrinolysis and **proteinases** in **urine** in)
IT 92303-18-9, Purine, 6-[imidazol-4(or 5)-ylthio]-

(in immune response during inductive phase, hemagglutin formation in relation to)

L109 ANSWER 40 OF 49 HCAPLUS COPYRIGHT 2003 ACS
AN **1962:4356** HCAPLUS
DN **56:4356**
OREF 56:835c-d
TI The problem of the biochemical **cancer** diagnosis with urinary **proteases**-the so-called Nitsche-complex reaction
AU Bayerle, Hans; Ebner-Putzar, Heidi; Strohm, Christoph
CS Univ. Munich, Germany
SO Aerztliche Forschung (**1961**), 15, 287-91
CODEN: ARZFAN; ISSN: 0001-9496
DT Journal
LA Unavailable
CC 71 (Mammalian Pathological Chemistry)
AB cf. following abstr. The Nitsche-complex reaction (CA 47, 7571e) was used to test 388 cases with known pathol. conditions for the presence of **carcinoma**. The test is not specific for **cancer**, but it can be useful as an auxiliary diagnostic test. In a large no. of cases the test fails because of interfering substances in the **urine**.
IT **Urine**
(fibrinolysis and **proteases** in, in **cancer**)
IT **Cancer**
(fibrinolysis and **proteinases** in **urine** in)
IT **Proteinases**
(in **urine** in **cancer**, fibrinolysis and)

L109 ANSWER 41 OF 49 HCAPLUS COPYRIGHT 2003 ACS
AN **1956:20870** HCAPLUS
DN **50:20870**
OREF 50:4327g-h
TI The detection of specific **proteinases** in **urine** in nutritive allergic shock by the Abderhalden catabolic enzyme reaction
AU Tetzner, E.
CS Kreiskrankenhaus, Soltau, Hannover, Germany
SO Deutsche Medizinische Wochenschrift (**1955**), 80, 1735-6
CODEN: DMWOAX; ISSN: 0012-0472
DT Journal
LA Unavailable
CC 11E (Biological Chemistry: Nutrition)
AB Urinary proteolytic activity of a human subject sensitive to legumin (I) was tested against I (pea protein), bean protein, **cancer** proteins, and human serum albumin. Following ingestion of sufficient I to produce an allergic reaction, **proteinase** activity against I, but not the other substrates, appeared in the **urine**.
IT Allergy
(**proteinases** in **urine** in)
IT **Urine**
(**proteinases** in, in allergy)
IT **Proteinases**
(in **urine**, in allergy)

L109 ANSWER 42 OF 49 HCAPLUS COPYRIGHT 2003 ACS
AN **1951:4252** HCAPLUS
DN **45:4252**
OREF 45:747g-i
TI Studies on urinary **proteases**. V. Fuch's **cancer** reaction with **urine** in place of blood serum
AU Saito, Akira
CS Imperial Kyushu Univ., Fukuoka
SO Journal of Biochemistry (Tokyo, Japan) (**1941**), 33, 323-38
CODEN: JOBIAO; ISSN: 0021-924X

DT Journal
LA Unavailable
CC 11G (Biological Chemistry: Pathology)
AB Blood contains specific enzymes which can hydrolyze foreign protein and also antienzymes which inhibit the enzymes from hydrolyzing the species specific proteins. The proteolytic enzymes which are responsible for the Fuchs **cancer** reaction pass through the renal epithelium but the antienzymes do not, with the result that **urine** contains only the enzymes, which can be pptd. with Me2CO. The serum enzymes can be activated by adsorption in acid medium and removal of the antienzymes on aluminiferous earths (Tonerde-A). Therefore, **urine** can be used instead of serum. The enzymes are pptd. and the reaction is followed by detg. NH2-N by the Folin procedure. The results of this **cancer** test agree to the extent of 90% with the clinical findings.
IT **Cancer**
(diagnosis of, Fuchs reaction for)
IT **Urine**
(**proteases** of)
IT **9014-01-1, Proteases 9014-01-1, Proteases**
(urinary)

L109 ANSWER 43 OF 49 HCAPLUS COPYRIGHT 2003 ACS
AN **1944:35456** HCAPLUS
DN **38:35456**
OREF 38:5289e-g
TI The detection of protective enzymes in the **urine** of **tumor** patients with the aid of the Abderhalden reaction and an attempt to produce specific protective **proteinases** by means of x-rays
AU Merten, Richard
SO Zeitschrift fuer die Gesamte Experimentelle Medizin (**1941**), 109, 333-46
From: Chem. Zentr. I, 1479(1943).
CODEN: ZGEMAZ; ISSN: 0372-8722
DT Journal
LA Unavailable
CC 11G (Biological Chemistry: Pathology)
AB cf. C. A. 37, 3496.4. The production of a homogeneous **carcinoma** -protein substrate is very difficult. In each **cancer** patient are found portions of **urine** in which protective **proteinases** are absent or are present in insufficient concn. It was desired to prep. a substrate consisting only of **carcinoma** cells, and to increase the existing concn. of protective enzyme or to cause formation of the enzyme. Enzyme formation was effected by single exposures of the **tumor** region to small doses of x-rays. Repetition of the exposure increased the enzyme production. It may thus be possible to differentiate between **carcinomatous** and **noncarcinomatous** patients by means of the Abderhalden reaction.

L109 ANSWER 44 OF 49 HCAPLUS COPYRIGHT 2003 ACS
AN **1944:20957** HCAPLUS
DN **38:20957**
OREF 38:3016i,3017a-c
TI Concentration and cleavage of Abderhalden's defense enzymes in **carcinoma** patients
AU Hinsberg, K.; Schleinzer, Beate
SO Zeitschrift fuer Krebsforschung (**1942**), 53, 35-46
From: Chem. Zentr. I, 166(1943).
CODEN: ZEKBAI; ISSN: 0301-1585
DT Journal
LA Unavailable
CC 11G (Biological Chemistry: Pathology)

AB Abderhalden's defense enzymes from **urine** of **carcinoma** patients were sepd. into a protein and a low-mol.-wt. fraction by treatment in a circulating dialyzer by Manegold's method (C. A. 25, 5608), preferably at pH 5.5-6, for 2-3 days. After neutralization, neither the dialyzate nor the material remaining within the dialyzing app. showed enzymic activity, but when the 2 substances were mixed activity was evident. The inner liquid is thermolabile, the outer stable to heating at 100.degree. for 30 min. H. and S. postulated that the sepn. was into co- and apo-enzyme. Since, with many enzymes of which the co- and apo-enzymes are known, the specificity of action is detd. by the coenzyme, while the substrate specificity depends on the apoenzyme, an attempt was made to see if this was the case with regard to the defense enzymes. Investigations in which co- and apo-enzymes of 2 different defense enzymes were interchanged, however, had only slight success, since when the acetone ppt. of **urine** from **carcinoma** patients was worked up, the specificity became lost as the defense enzyme soln. was concd. The concd. enzyme soln. cleaved all **carcinoma** substrates nonspecifically. Strong cleavage was obtained by addn. of 1:20,000-1:100,000 trypsin (itself inactive) to apparently inactive defense **proteinases**.

L109 ANSWER 45 OF 49 HCAPLUS COPYRIGHT 2003 ACS
AN **1943:23512** HCAPLUS
DN **37:23512**
OREF 37:3821a-b
TI Preparation of crystalline protective **proteinases** from the **urine** in mammary **carcinoma**
AU Winkler, Walter
SO Zeitschrift fuer die Gesamte Experimentelle Medizin (**1941**), 109, 670-8
From: Chem. Zentr. 1942, I, 3214.
CODEN: ZGEMAZ; ISSN: 0372-8722
DT Journal
LA Unavailable
CC 11G (Biological Chemistry: Pathology)
AB By the micromethod of the Abderhalden reaction specific decompn. of the **carcinoma** substrate was observed in mammary **carcinoma**. A concd. enzyme soln. was obtained from the **urine** and from this crystals were recovered that showed a potent specific effect after activation by trypsin.

L109 ANSWER 46 OF 49 HCAPLUS COPYRIGHT 2003 ACS
AN **1943:21533** HCAPLUS
DN **37:21533**
OREF 37:3496c-g
TI Appearance of protective **proteinases** in the **urine** of animals with inoculated **tumors** after Rontgen irradiation
AU Merten, Richard; Weissmuller, Paul
SO Fermentforschung (**1941**), 16, 371-6
CODEN: FEFOAG; ISSN: 0367-2034
DT Journal
LA Unavailable
CC 11G (Biological Chemistry: Pathology)
AB Brown-Pearce, Walker and Flexner-Jobling **carcinomas** were used in rat and rabbit expts. Six weeks after inoculation (after all had become negative to the Abderhalden reaction) all animals received Rontgen irradiation of 500 r. in the abdominal area. The animals, in which **metastasis** had begun, showed a breakdown of the Brown-Pearce substrate in the next urinary output. At a later stage of the disease 200-400 r. sufficed to make the Abderhalden reaction positive again. Irradiation of otherwise normal rabbits was followed by a breakdown of a Brown-Pearce **tumor**-substrate only after 750 r. The same conditions prevailed with Walker and Flexner-Jobling **carcinomas**

inoculated in rats. An effect upon the organ substrate could be clearly observed after irradiation of large Flexner-Jobling **carcinomas**. In this case both broke down after irradiation of the **carcinoma** substrate. It is, therefore, possible by regulating the size of the Rontgen dose as is done in the case of animals with induced **tumors**, to produce protective **proteinases** after specific irradiation of the **tumor** protein. The enzymes can also be produced after an injection of fresh or dried **tumor** tissue. The establishment of such an apparently nonspecific protective process appears to depend upon the quantity of freed protein, whether it be from **tumor** or from organ cells through irradiation or from the **tumor** protein depot after injection. The possibility that it is derived from a toxic injury to the organs has not been excluded.

L109 ANSWER 47 OF 49 HCAPLUS COPYRIGHT 2003 ACS
AN **1943:12260** HCAPLUS
DN **37:12260**
OREF 37:2027f-i
TI The stability of defense **proteinases** and the gaging of the substrate for the Abderhalden reaction
AU Abderhalden, Rudolf
SO Fermentforschung (**1939**), 16, 210-14
CODEN: FEFOAG; ISSN: 0367-2034
DT Journal
LA Unavailable
CC 11A (Biological Chemistry: General)
AB Defense **proteinases** can be pptd. from **urine** with acetone and dried in powder form without loss to their activity and specificity. The acetone ppt. is centrifuged and dried in a vacuum desiccator over H2SO4 and P2O5, powdered fine and stored in glass containers. The dry acetone ppt. can be emulsified just like the fresh pptd. material; this assures a fine suspension to work with. By intensive grinding with 0.9% NaCl and letting the solns. stand 3-4 hrs. at 37.degree., the enzyme is extd. and centrifuged. The clear soln. is tested in the usual manner. These processes have great importance for the production of a collection of different enzyme prepns., for instance, stomach **carcinoma** protein, liver protein, pneumococcus protein and others. The amt. of acetone ppt. from different **urines** varies from 4 to 28 mg. per 10 cc. **urine**.

L109 ANSWER 48 OF 49 HCAPLUS COPYRIGHT 2003 ACS
AN **1941:28112** HCAPLUS
DN **35:28112**
OREF 35:4468b-c
TI Studies on urinary **protease**. IV. Occurrence of urinary **protease** in rabbit **sarcoma**
AU Tuno, Sigetada
SO Journal of Biochemistry (Tokyo, Japan) (**1940**), 32, 419-23
CODEN: JOBIAO; ISSN: 0021-924X
DT Journal
LA Unavailable
CC 11G (Biological Chemistry: Pathology)
AB The urinary **protease** was detd. in **urine** from healthy and sarcomatous rabbits as well as rabbits injected with boiled **sarcoma** protein. In all the healthy rabbits the reaction was neg. In rabbits inoculated with **sarcoma** the reaction, about a week later, became pos. while in the animals receiving injections of boiled **sarcoma** protein the reaction became pos. almost immediately. Cf. C. A. 26, 1628.

L109 ANSWER 49 OF 49 HCAPLUS COPYRIGHT 2003 ACS
AN **1941:28111** HCAPLUS
DN **35:28111**

OREF 35:4467g-i,4468a-b
TI Studies on urinary **protease**. III. **Cancer** diagnosis by urinary **protease**
AU Tuno, Sigetada
SO Journal of Biochemistry (Tokyo, Japan) (**1940**), 32, 371-88
CODEN: JOBIAO; ISSN: 0021-924X
DT Journal
LA Unavailable
CC 11G (Biological Chemistry: Pathology)
AB Prepn. of substrate: Free strictly fresh **cancer** tissue from fat, etc., cut into small pieces, wash in water and leave about 6 hrs. in ice chest covered with distd. water. Rub in a mortar, wash with distd. H2O and transfer the material to very slightly acidified boiling water. Boil the material 5 times, pouring off the water each time. Treat with acetone, acetone-ether and ether, powder the dry defatted material and sterilize it at 80.degree.. Prepn. of **urine**: Use fresh morning **urine**, adjust the reaction to pH 7.0, filter and measure 30 cc. of sp. gr. 1020 into a centrifuge tube. For other sp. gr. adjust the quantity of **urine** according to a calcd. formula. Add an equal vol. acetone, centrifuge after 10 min. and dissolve the residue in 15.5 cc. 0.9% NaCl. Three 5-cc. samples of the enzyme soln. are employed with 10 mg. substrate. Incubate the tubes 45 hrs. at 37.degree., centrifuge and det. the amino acids in the supernatant fluid. Subtract the amino acid content of the 2 control tubes (which usually agree within the exptl. error) from that of the tube contg. the active enzyme and substrate. An increase of more than 0.25 mg. is regarded as pos. and of less than 0.24 mg. as neg. In 89% of **cancer** patients the results were pos. while in 97% of **noncancer** patients the results were neg. and the one patient with a pos. reaction was suspected to suffer from a **malignant** degeneration of ulcus ventriculus. In healthy persons the reaction was invariably neg. After surgical extirpation of the **tumor** the enzymic activity disappeared in about a week's time. The reaction is not reliable with albumin-contg. **urines** or with old **urine** specimens.

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L141 ANSWER 1 OF 19 MEDLINE
AN **1999035058** MEDLINE
DN **99035058** PubMed ID: **9816210**
TI Proteases as prognostic markers in cancer.
AU Duffy M J
CS Nuclear Medicine Department, St. Vincent's Hospital, Dublin 4, Ireland.
SO CLINICAL CANCER RESEARCH, **(1996 Apr)** 2 (4) 613-8. Ref: 73
Journal code: 9502500. ISSN: 1078-0432.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)

(REVIEW, TUTORIAL)
LA English
FS Priority Journals
EM 199902
ED Entered STN: 19990223
Last Updated on STN: 20020420
Entered Medline: 19990210

AB It is the ability to invade and metastasize that ultimately determines the prognosis in cancer. Comprising one of the key groups of molecules involved in invasion and metastasis are **proteases** such as urokinase plasminogen activator and cathepsins B, D, and L, as well as various **metalloproteases**. These **proteases** catalyze degradation of the interstitial **matrix** and basement membranes, allowing cancer cells to invade locally and metastasize to distant sites. If **proteases** are directly and causally involved in cancer spread, they have the potential to be new prognostic markers in cancer. One of the best examples of a correlation between high levels of a **protease** in a primary tumor and poor prognosis is urokinase plasminogen activation in breast cancer. In this malignancy, the urokinase plasminogen activator is a strong and independent prognostic marker and may be a marker for axillary node-negative disease. The urokinase plasminogen activator may also be a prognostic marker in other cancers such as gastric, colorectal, lung, bladder, cervical, and ovarian cancers. In a number of studies, cathepsin D has been shown to be a prognostic factor in breast cancer. However, results with cathepsin D, especially when immunocytochemistry is used for its detection, are conflicting. Levels of cathepsin B, cathepsin L, and certain **metalloproteases** may also supply prognostic data in certain cancers, but results with these **proteases** are still preliminary.

CT Check Tags: Animal; Human; Support, Non-U.S. Gov't
Cathepsin B: ME, metabolism
Cathepsin D: ME, metabolism
Cathepsins: ME, metabolism
Collagenases: ME, metabolism
*Endopeptidases: ME, metabolism
Gelatinase A
Gelatinase B
Gelatinases: ME, metabolism
Metalloendopeptidases: ME, metabolism
***Neoplasms: EN, enzymology**
Prognosis
Tumor Markers, Biological
Urinary Plasminogen Activator: ME, metabolism

CN 0 (Tumor Markers, Biological); EC 3.4.- (Cathepsins); EC 3.4.- (Endopeptidases); EC 3.4.21.73 (**Urinary** Plasminogen Activator); EC 3.4.22.- (cathepsin L, rat); EC 3.4.22.- (cathepsin L, transformed mouse fibroblasts); EC 3.4.22.1 (Cathepsin B); EC 3.4.22.15 (cathepsin L); EC 3.4.23.5 (Cathepsin D); EC 3.4.24 (Metalloendopeptidases); EC 3.4.24.- (**Collagenases**); EC 3.4.24.- (**Gelatinases**); EC 3.4.24.24 (**Gelatinase** A); EC 3.4.24.35 (**Gelatinase** B)

L141 ANSWER 2 OF 19 MEDLINE
AN **96389905** MEDLINE
DN **96389905** PubMed ID: **8796999**
TI Urokinase plasminogen activator as a predictor of aggressive disease in breast cancer.
AU Duffy M J; Duggan C; Maguire T; Mulcahy K; Elvin P; McDermott E; Fennelly J J; O'Higgins N
CS Department of Nuclear Medicine, St. Vincent's Hospital, Dublin, Ireland.
SO ENZYME AND PROTEIN, **(1996)** 49 (1-3) 85-93.
Journal code: 9422761. ISSN: 1019-6773.
CY Switzerland
DT Journal; Article; (JOURNAL ARTICLE)

LA English
FS Priority Journals
EM 199612
ED Entered STN: 19970128
Last Updated on STN: 20000303
Entered Medline: 19961203
AB Urokinase plasminogen activator (uPA) is a multifunctional protein involved in both extracellular proteolysis and signal transduction. uPA usually mediates its actions while attached to a membrane-bound receptor, termed uPAR. In this study, uPA and its receptor were measured at both protein and mRNA levels in breast cancer. At both levels, concentrations of uPA were significantly correlated with those for uPAR. uPA levels also correlated significantly with cathepsin B and cathepsin D but not with cathepsin L, **MMP**-8 or **MMP**-9 levels. Irrespective of the cut-off point used (e.g., median, tertile or quartile values), uPA was a significant prognostic marker for breast cancer.
CT Check Tags: Female; Human; Support, Non-U.S. Gov't
Blotting, Northern
***Breast Neoplasms: PA, pathology**
Enzyme-Linked Immunosorbent Assay
*Plasminogen Activators: AN, analysis
Prognosis
RNA, Messenger: ME, metabolism
***Urinary Plasminogen Activator: AN, analysis**
CN 0 (RNA, Messenger); EC 3.4.21.- (Plasminogen Activators); EC 3.4.21.73 (**Urinary** Plasminogen Activator)

L141 ANSWER 3 OF 19 MEDLINE
AN **96089015** MEDLINE
DN **96089015** PubMed ID: **7491516**
TI Increased plasminogen activator and type IV **collagenase** activity in invasive follicular thyroid carcinoma cells.
AU Packman K S; Demeure M J; Doffek K M; Wilson S D
CS Department of Surgery, Medical College of Wisconsin, Milwaukee 53226, USA.
SO SURGERY, **(1995 Dec)** 118 (6) 1011-6; discussion 1016-7.
Journal code: 0417347. ISSN: 0039-6060.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Abridged Index Medicus Journals; Priority Journals
EM 199601
ED Entered STN: 19960125
Last Updated on STN: 20000303
Entered Medline: 19960104
AB BACKGROUND. An essential difference between benign and malignant follicular thyroid tumors is the ability to invade and metastasize. Thyrotropin (TSH) stimulates invasion of cultured human follicular thyroid cancer cells (FTC-133) via a protein kinase C (PKC) dependent mechanism. Tumor invasion depends on degradation of extracellular matrix by proteases. METHODS. We analyzed protease activity in FTC-133 and its more invasive clone, FTC-238. Cells were treated with TSH or 12-0-tetradecanoyl-phorbol-13-acetate (TPA), a PKC agonist, for 24 hours. Conditioned medium and cellular extract were subjected to substrate gel zymography with either casein-plasminogen or gelatin (collagen). Western blot and immunohistochemistry confirmed protease identity. RESULTS. We found increased 50 kd urokinase-like plasminogen activator (uPA) and 62 kd **gelatinase** activity by FTC-238 cells compared with the less invasive FTC-133 cells. There was no effect of TSH on uPA or **collagenase** activity at concentrations of 0.01 to 10 mU/ml. In both FTC-133 and FTC-238, TPA incubations of 0.1 to 100 ng/ml caused a dose-dependent increase in uPA and a 94 kd type IV **collagenase**. CONCLUSIONS. These findings show that TSH-stimulated invasion may be due to PKC-induced activation of uPA and 94 kd type IV **collagenase**.

uPA and basement membrane type IV **collagenase** warrant investigation as markers for follicular thyroid cancer.

CT Check Tags: Human; Support, Non-U.S. Gov't
***Adenoma: EN, enzymology**
Adenoma: PA, pathology
***Collagenases: ME, metabolism**
Gelatinases: ME, metabolism
Neoplasm Invasiveness
Protein Kinase C: ME, metabolism
***Thyroid Neoplasms: EN, enzymology**
Thyroid Neoplasms: PA, pathology
Thyrotropin: PD, pharmacology
Tumor Cells, Cultured
***Urinary Plasminogen Activator: ME, metabolism**

RN 9002-71-5 (Thyrotropin)

CN EC 2.7.1.37 (Protein Kinase C); EC 3.4.21.73 (**Urinary** Plasminogen Activator); EC 3.4.24.- (**Collagenases**); EC 3.4.24.- (**Gelatinases**)

L141 ANSWER 4 OF 19 MEDLINE

AN **96083717** MEDLINE

DN **96083717** PubMed ID: **7591285**

TI Over-expression of tissue inhibitor of **matrix metalloproteinases** (TIMP1 and TIMP2) suppresses extravasation of pulmonary metastasis of a rat bladder carcinoma.

AU Kawamata H; Kawai K; Kameyama S; Johnson M D; Stetler-Stevenson W G; Oyasu R

CS Department of Pathology, Northwestern University Medical School, Chicago, IL 60611, USA.

NC CA14649 (NCI)

SO INTERNATIONAL JOURNAL OF CANCER, **(1995 Nov 27)** 63 (5) 680-7. Journal code: 0042124. ISSN: 0020-7136.

CY United States

DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS Priority Journals

EM 199512

ED Entered STN: 19960124
Last Updated on STN: 20000303
Entered Medline: 19951228

AB The balance between **matrix metalloproteinases** and their inhibitors is a critical factor which affects tumor invasion and metastasis. We have established a rat bladder carcinoma cell line, LMC19, which is tumorigenic, invasive and metastatic to the retroperitoneal lymph nodes and to the lungs in nude mice. LMC19 cells secrete pro-**gelatinases** A and B as well as tissue inhibitors of **matrix metalloproteinase** (TIMP1 and TIMP2). We conducted the present study to determine whether or not over-expression of TIMP1 and TIMP2 can affect the metastatic potential of LMC19 cells. We transfected the cells with an expression vector containing TIMP1 or TIMP2 cDNA, isolated several clones over-expressing TIMP1 or TIMP2 and assessed their invasive and metastatic potential by inoculation at an orthotopic site (**urinary** bladder) in nude mice. Our results show that the transfectants over-expressing TIMP1 and TIMP2 marginally affect primary tumor growth, local invasion or metastasis to the retroperitoneal lymph nodes but significantly inhibit extravascular growth of pulmonary tumor emboli. Our results suggest that the net activity of **matrix metalloproteinases** of tumor cells may be a critical factor that controls extravasation at this distant metastatic site.

CT Check Tags: Animal; Human; Support, Non-U.S. Gov't; Support, U.S. Gov't, P.H.S.
***Bladder Neoplasms: ME, metabolism**
Bladder Neoplasms: PA, pathology

Cell Division
Enzyme Precursors: ME, metabolism
Gelatin: ME, metabolism
Gelatinases: ME, metabolism
*Glycoproteins: BI, biosynthesis
Glycoproteins: GE, genetics
Immunohistochemistry
Lung Neoplasms: BL, blood
***Lung Neoplasms: ME, metabolism**
***Lung Neoplasms: SC, secondary**
Metalloendopeptidases: ME, metabolism
Mice
Mice, Nude
***Neoplasm Circulating Cells: ME, metabolism**
Neoplasm Circulating Cells: PA, pathology
Neoplasm Transplantation
*Proteins: BI, biosynthesis
Proteins: GE, genetics
RNA, Messenger: GE, genetics
RNA, Messenger: ME, metabolism
Rats
Tissue Inhibitor of Metalloproteinases
Tissue Inhibitor-of Metalloproteinase-2
Transfection
Tumor Cells, Cultured
RN **127497-59-0 (Tissue Inhibitor-of Metalloproteinase-2)**; 9000-70-8 (Gelatin)
CN 0 (Enzyme Precursors); 0 (Glycoproteins); 0 (Proteins); 0 (RNA, Messenger); 0 (Tissue Inhibitor of **Metalloproteinases**); EC 3.4.24 (Metalloendopeptidases); EC 3.4.24.- (**Gelatinases**); EC 3.4.24.- (progelatinase)

L141 ANSWER 5 OF 19 MEDLINE
AN **96074746** MEDLINE
DN **96074746** PubMed ID: **7591268**
TI Marked acceleration of the metastatic phenotype of a rat bladder carcinoma cell line by the expression of human **gelatinase** A.
AU Kawamata H; Kameyama S; Kawai K; Tanaka Y; Nan L; Barch D H; Stetler-Stevenson W G; Oyasu R
CS Department of Pathology, Northwestern University Medical School, Chicago, IL 60611, USA.
NC CA14649 (NCI)
SO INTERNATIONAL JOURNAL OF CANCER, **(1995 Nov 15)** 63 (4) 568-75. Journal code: 0042124. ISSN: 0020-7136.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199512
ED Entered STN: 19960124
Last Updated on STN: 20000303
Entered Medline: 19951228
AB Numerous studies have reported a correlation between the production of **gelatinases** A and B by cancer cells and invasive and metastatic potential. It has been suggested that the expression of **gelatinase** A (72-kDa type IV **collagenase**) is associated more closely with the metastatic phenotype of malignant cells in vitro and in vivo than that of **gelatinase** B (92-kDa type IV **collagenase**). We have established a rat bladder carcinoma cell line, MYU3L, which is tumorigenic and locally invasive but is not metastatic to the distal organs in nude mice. The MYU3L cell line secretes pro-**gelatinase** B but not any detectable level of pro-**gelatinase** A. We undertook the present study to determine whether

over-expression of **gelatinase** A can affect the metastatic potential of MYU3L cells. We transfected MYU3L cells with an expression vector containing human pro-**gelatinase** A cDNA under the transcriptional control of the SR alpha promoter. Two stable transfectants over-expressing **gelatinase** A activity were isolated. We assessed the biological behavior of the transfectants by an orthotopic site (**urinary** bladder) inoculation and an i.v. injection in nude mice. Our results demonstrate that the induced expression of human **gelatinase** A enzyme markedly accelerates the metastatic phenotype of the rat bladder carcinoma cell line MYU3L. Our results suggest that **gelatinase** A produced by tumor cells plays a major role in the metastatic process.

CT Check Tags: Animal; Human; Support, Non-U.S. Gov't; Support, U.S. Gov't, P.H.S.
Antibodies
***Bladder Neoplasms: EN, enzymology**
Bladder Neoplasms: GE, genetics
***Bladder Neoplasms: PA, pathology**
Cell Division: PH, physiology
Collagen: ME, metabolism
DNA, Neoplasm: GE, genetics
Enzyme Precursors: GE, genetics
Gelatinase A
Gelatinases: GE, genetics
***Gelatinases: ME, metabolism**
Immunohistochemistry
Lung Neoplasms: SC, secondary
Lymphatic Metastasis
Metalloendopeptidases: GE, genetics
*Metalloendopeptidases: ME, metabolism
Mice
Mice, Nude
Neoplasm Invasiveness
Neoplasm Metastasis: GE, genetics
Neoplasm Transplantation
Phenotype
Promoter Regions (Genetics)
Proteins: ME, metabolism
Rats
Tissue Inhibitor-of Metalloproteinase-2
Transfection
Tumor Cells, Cultured

RN **127497-59-0 (Tissue Inhibitor-of Metalloproteinase-2)**; 9007-34-5 (Collagen)

CN 0 (Antibodies); 0 (DNA, Neoplasm); 0 (Enzyme Precursors); 0 (Proteins); EC 3.4.24 (Metalloendopeptidases); EC 3.4.24.- (**Gelatinases**); EC 3.4.24.- (progelatinase); EC 3.4.24.24 (**Gelatinase** A)

L141 ANSWER 6 OF 19 MEDLINE

AN **94313764** MEDLINE

DN **94313764** PubMed ID: **8039304**

TI Expression of 72 kDa type IV **collagenase** and invasion activity of human glioma cells.

AU Abe T; Mori T; Kohno K; Seiki M; Hayakawa T; Welgus H G; Hori S; Kuwano M

CS Department of Biochemistry, Kyushu University School of Medicine, Japan.

NC 35805

SO CLINICAL AND EXPERIMENTAL METASTASIS, **(1994 Jul)** 12 (4) 296-304. Journal code: 8409970. ISSN: 0262-0898.

CY ENGLAND: United Kingdom

DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS Priority Journals

EM 199408

ED Entered STN: 19940905
Last Updated on STN: 20000303
Entered Medline: 19940823

AB **Metalloproteinases**, inhibitors of **metalloproteinases**, plasminogen activators, inhibitors of plasminogen activators and cathepsins are thought to be involved in invasion by tumor cells. Glioblastoma multiforme is highly malignant and extremely refractory to therapy. One reason is because of its highly invasive nature within the nervous system. However, it remains unclear how invasion/dissemination of glioblastoma multiforme proceeds. In this study, we attempted to determine which **proteinases** were responsible for the invasion activity of human glioma cell lines in vitro. Nine human glioma cell lines (NHG1, NHG2, IN157, IN301, IN500, U251, U343, T98G and CCF-STTG1) derived from patients with glioma were grown in culture and used. We compared the invasion activity of glioma cell lines in a Matrigel invasion assay system, and formulated the activity as invasion index (%). Among the nine cell lines, IN157, IN500 and U343 showed less than 10% invasion activity (low group); NHGI, IN301 and CCF-STTG1 showed 10-25% activity (intermediate group); NHG2, U251 and T98G showed more than 30% activity (high group). Addition of an inhibitor of **metalloproteinases**, TIMP-1, to the assay system was found to significantly inhibit invasion activity of T98G cells ($P < 0.01$). Northern blot analysis demonstrated expression of urokinase-type plasminogen activator (uPA), tissue-type PA (tPA) and PA inhibitor-1 (PAI-1) in some of the above cell lines. Cellular levels of PAs and their inhibitor mRNA, however, appeared not to be correlated with invasion activity in most glioma cell lines except for CCF-STTG1. Expression of 72 kDa type IV **collagenase** (**MMP**-2) was much lower in IN157, IN500 and U343 than other cell lines, whereas expression of TIMP-1 was much higher in IN500 than in other cell lines. Zymographic activity was found to be comparable to **MMP**-2 mRNA levels in all cell lines except for CCF-STTG1. Type IV collagenolytic activity was also comparable to invasion activity in nine cell lines. These observations suggest the role of type IV **collagenase** and its inhibitors in determining capacity for invasion by human gliomas. However, a comprehensive analysis both in vitro and in vivo is required to confirm the role for this enzyme in glioma cell invasiveness.

CT Check Tags: Human; Support, U.S. Gov't, P.H.S.
***Collagenases: ME, metabolism**
Gelatinase A
Gelatinase B
Gelatinases: GE, genetics
Gelatinases: ME, metabolism
Gene Expression
***Glioma: EN, enzymology**
Glycoproteins: GE, genetics
Glycoproteins: ME, metabolism
Metalloendopeptidases: GE, genetics
Metalloendopeptidases: ME, metabolism
Neoplasm Invasiveness
Plasminogen Activator Inhibitor 1: GE, genetics
Proteins: GE, genetics
Proteins: ME, metabolism
RNA, Messenger: GE, genetics
Tissue Inhibitor of Metalloproteinases
Tissue Inhibitor-of Metalloproteinase-2
Tissue Plasminogen Activator: GE, genetics
Tumor Cells, Cultured
Urinary Plasminogen Activator: GE, genetics

RN **127497-59-0 (Tissue Inhibitor-of Metalloproteinase-2)**

CN 0 (Glycoproteins); 0 (Plasminogen Activator Inhibitor 1); 0 (Proteins); 0 (RNA, Messenger); 0 (Tissue Inhibitor of **Metalloproteinases**); EC 3.4.21.68 (Tissue Plasminogen Activator); EC 3.4.21.73 (**Urinary**

Plasminogen Activator); EC 3.4.24 (Metalloendopeptidases); EC 3.4.24.- (**Collagenases**); EC 3.4.24.- (**Gelatinases**); EC 3.4.24.24 (**Gelatinase** A); EC 3.4.24.35 (**Gelatinase** B)

L141 ANSWER 7 OF 19 MEDLINE
AN **93346113** MEDLINE
DN **93346113** PubMed ID: **8344748**
TI Enhanced expression of a tumor-cell-derived **collagenase** -stimulatory factor in urothelial carcinoma: its usefulness as a tumor marker for bladder cancers.
AU Muraoka K; Nabeshima K; Murayama T; Biswas C; Koono M
CS Department of Pathology, Miyazaki Medical College, Japan.
NC CA 38817 (NCI)
SO INTERNATIONAL JOURNAL OF CANCER, **(1993 Aug 19)** 55 (1) 19-26.
Journal code: 0042124. ISSN: 0020-7136.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199309
ED Entered STN: 19930924
Last Updated on STN: 19970203
Entered Medline: 19930903
AB A mouse monoclonal antibody (MAb) E11F4, previously raised against the tumor-cell-derived **collagenase**-stimulatory factor (TCSF) from LX-1 human lung-carcinoma cells, has been used to define the expression and distribution of TCSF in human non-neoplastic urothelium and tumors of the **urinary** bladder. Immunohistochemically, TCSF was detected in 27/28 transitional-cell carcinomas (TCC) of the bladder, of which 23 were judged to be positive for TCSF according to objective criteria. Twenty-four of 28 non-neoplastic urothelium from 22 individuals were judged to be negative for TCSF by this criteria. However, TCSF immunostaining that was confined to the superficial umbrella cells was frequently observed in non-neoplastic urothelium. In bladder carcinomas, TCSF was in most cases demonstrated in the majority of cells, including at the invasion front. Its localization to the cell membrane was demonstrated by immunoelectron microscopy. The high level of expression of TCSF in bladder tumors, but not in non-neoplastic urothelium, was also demonstrated by immunoblotting of tissue extracts. Furthermore, E11F4 immunostaining identified tumor cells obtained from bladder washings or voided **urine** and detected more TCC cases than conventional cytology. Since TCSF immunostaining was positive even in low-grade TCC (immunohistochemically and immunocytochemically in 4/5 TCC grade I), the application of TCSF immunostaining to **urine** cytology appears promising as a valuable adjunct to conventional methods in the clinical evaluation of patients with TCC.
CT Check Tags: Human; Support, U.S. Gov't, P.H.S.
***Bladder Neoplasms: CH, chemistry**
Bladder Neoplasms: DI, diagnosis
Bladder Neoplasms: UR, urine
***Carcinoma, Transitional Cell: CH, chemistry**
Carcinoma, Transitional Cell: DI, diagnosis
Carcinoma, Transitional Cell: UR, urine
Immunoblotting
Immunoenzyme Techniques
*Membrane Glycoproteins: AN, analysis
Membrane Glycoproteins: BI, biosynthesis
Membrane Glycoproteins: UR, urine
Microscopy, Immunoelectron
Tumor Cells, Cultured
***Tumor Markers, Biological: AN, analysis**
Tumor Markers, Biological: BI, biosynthesis
Tumor Markers, Biological: UR, urine

Urine: CY, cytology
CN 0 (Membrane Glycoproteins); 0 (Tumor Markers, Biological); 0 (tumor cell **collagenase** stimulating factor)

L141 ANSWER 8 OF 19 MEDLINE
AN **93306657** MEDLINE
DN **93306657** PubMed ID: **8319225**
TI Tumor cell-derived **collagenase**-stimulatory factor increases expression of interstitial **collagenase, stromelysin,** and 72-kDa **gelatinase.**
AU Kataoka H; DeCastro R; Zucker S; Biswas C
CS Department of Anatomy and Cellular Biology, Tufts University School of Medicine, Boston, Massachusetts 02111.
NC CA 38817 (NCI)
SO CANCER RESEARCH, **(1993 Jul 1)** 53 (13) 3154-8.
Journal code: 2984705R. ISSN: 0008-5472.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199307
ED Entered STN: 19930813
Last Updated on STN: 20000303
Entered Medline: 19930730
AB The tumor cell-derived **collagenase**-stimulatory factor (TCSF) was previously purified from human lung carcinoma cells (S. M. Ellis, K. Nabeshima, and C. Biswas, Cancer Res., 49: 3385-3391, 1989). This protein is present on the surface of several types of human tumor cells in vitro and in vivo and stimulates production of interstitial **collagenase** in human fibroblasts. In this study it is shown that TCSF stimulates expression in human fibroblasts of mRNA for **stromelysin** 1 and 72-kDa **gelatinase**/type IV **collagenase**, as well as for interstitial **collagenase.** Measurement of enzyme protein by immunoassay showed that the amounts of interstitial **collagenase** and **stromelysin** 1 were increased in TCSF-treated fibroblasts; gelatin zymography indicated that there was an increase in the 72-kDa **gelatinase.** These results indicate that tumor cell interaction with fibroblasts via TCSF could lead to increased degradation of interstitial or basement membrane matrix components and thus to enhanced tumor cell invasion.
CT Check Tags: Animal; Human; Support, U.S. Gov't, Non-P.H.S.; Support, U.S. Gov't, P.H.S.
Blotting, Northern
***Collagenases: GE, genetics**
DNA Probes
Extracellular Matrix: DE, drug effects
Extracellular Matrix: ME, metabolism
Fibroblasts: DE, drug effects
Fibroblasts: PH, physiology
Gelatinase B
*Gene Expression: DE, drug effects
Gene Expression: GE, genetics
Immunoenzyme Techniques
Interstitial Collagenase
***Lung Neoplasms: EN, enzymology**
***Lung Neoplasms: GE, genetics**
*Membrane Glycoproteins: PD, pharmacology
*Metalloendopeptidases: GE, genetics
Mice
Mice, Nude
*Neoplasm Proteins: GE, genetics
RNA, Messenger: GE, genetics
RNA, Messenger: ME, metabolism

Stimulation, Chemical
Stromelysin 1
Tumor Markers, Biological
Urinary Plasminogen Activator: GE, genetics

CN 0 (DNA Probes); 0 (Membrane Glycoproteins); 0 (Neoplasm Proteins); 0 (RNA, Messenger); 0 (Tumor Markers, Biological); 0 (tumor cell **collagenase** stimulating factor); EC 3.4.21.73 (**Urinary** Plasminogen Activator); EC 3.4.24 (Metalloendopeptidases); EC 3.4.24.- (**Collagenases**); EC 3.4.24.17 (**Stromelysin** 1); EC 3.4.24.35 (**Gelatinase** B); EC 3.4.24.7 (Interstitial **Collagenase**)

L141 ANSWER 9 OF 19 MEDLINE
AN **93293388** MEDLINE
DN **93293388** PubMed ID: **8514458**
TI Role of plasminogen activators, **metalloproteinases** and the tissue inhibitor of **metalloproteinase**-1 in the metastatic process of human salivary-gland adenocarcinoma cells.
AU Azuma M; Tamatani T; Fukui K; Yoshida H; Kamogashira T; Ogino K; Suzuki T; Sato M
CS Second Department of Oral and Maxillofacial Surgery, Tokushima University School of Dentistry, Japan.
SO INTERNATIONAL JOURNAL OF CANCER, **(1993 Jun 19)** 54 (4) 669-76.
Journal code: 0042124. ISSN: 0020-7136.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199307
ED Entered STN: 19930806
Last Updated on STN: 20000303
Entered Medline: 19930722
AB An in vitro system has been established in which conversion from non-metastasizing to metastasizing adenocarcinoma cells can be induced, and subsequently subjected to analysis of the expression of **proteases** and tissue inhibitor of **metalloproteinases**-1 (TIMP-1). A human salivary-gland adenocarcinoma cell clone HSGc, with no metastatic ability, was exposed to N-methyl-N-nitrosourea (MNU). Following exposure to MNU, cells with altered morphology were cloned. Upon s.c. inoculation into nude mice, MNU-treated HSGc clones formed metastatic foci in various organs, and then 5 metastasizing clones were isolated. Evaluation of expression of tissue-type plasminogen activator (tPA), urokinase-type plasminogen activator (uPA), **metalloproteinases** and TIMP-1 was performed by means of enzyme immunoassay, zymogram, or immunoblot. MNU-treated HSGc and metastasizing clones were found to secrete high levels of tPA, while HSGc produced undetectable levels of this enzyme. Expression of uPA was not observed in any of the cell clones. When the secretion of gelatinolytic enzymes was examined, metastasizing clones produced higher levels of 57- and 32-kDa, but not of 92- or 72-kDa **gelatinases**, as compared to HSGc cells. Although TIMP-1 was detected in all cell clones, metastasizing clones secreted less TIMP-1 than HSGc cells; in addition, one metastasizing clone produced TIMP-1 with a molecular weight distinct from that of 28-kDa TIMP-1. Our results suggest that the acquisition of metastatic ability by human salivary-gland tumor cells is closely associated with increased secretion of several **metalloproteinases** as well as decreased or altered TIMP-1 expression.
CT Check Tags: Animal; Female; Human; Support, Non-U.S. Gov't
Adenocarcinoma: EN, enzymology
Adenocarcinoma: PA, pathology
***Adenocarcinoma: SC, secondary**
*Glycoproteins: AN, analysis
*Metalloendopeptidases: AN, analysis

Methylnitrosourea
Mice
Mice, Nude
*Salivary Gland Neoplasms
Salivary Gland Neoplasms: EN, enzymology
Salivary Gland Neoplasms: PA, pathology
Tissue Inhibitor of Metalloproteinases
*Tissue Plasminogen Activator: AN, analysis
Tumor Cells, Cultured
*Urinary Plasminogen Activator: AN, analysis
RN 684-93-5 (Methylnitrosourea)
CN 0 (Glycoproteins); 0 (Tissue Inhibitor of **Metalloproteinases**); EC 3.4.21.68 (Tissue Plasminogen Activator); EC 3.4.21.73 (**Urinary** Plasminogen Activator); EC 3.4.24 (Metalloendopeptidases)

L141 ANSWER 10 OF 19 MEDLINE
AN **93258146** MEDLINE
DN **93258146** PubMed ID: **1302559**
TI **Urinary** type IV **collagenase**: elevated levels are associated with bladder transitional cell carcinoma.
AU Margulies I M; Hoyhtya M; Evans C; Stracke M L; Liotta L A; Stetler-Stevenson W G
CS Laboratory of Pathology, National Cancer Institute, NIH, Bethesda, Maryland 20892.
SO CANCER EPIDEMIOLOGY, BIOMARKERS AND PREVENTION, **(1992 Sep-Oct)** 1 (6) 467-74.
Journal code: 9200608. ISSN: 1055-9965.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199306
ED Entered STN: 19930625
Last Updated on STN: 20000303
Entered Medline: 19930617
AB Accumulating experimental evidence has linked the overproduction of extracellular **matrix**-degrading **metalloproteinases** with tumor cell invasion. In the present study one member of the **metalloproteinase** family, type IV **collagenase** (M(r) 72,000 **gelatinase**), is shown to be elevated in the **urine** of patients with transitional cell carcinoma of the bladder. The form of the enzyme in the **urine** was studied by three independent methods: enzyme-linked immunosorbent assay, Western immunoblotting; and gelatin zymography. Immunoblotting revealed that the enzyme was present as a series of fragments, each retaining the amino terminus of the mature proenzyme. A prominent M(r) 43,000 fragment was associated with the transitional cell carcinoma cases. Zymography demonstrated that multiple enzyme species with **gelatinase** activity were present in **urine** and that high-molecular-weight bands of substrate lysis corresponded to complexes between type IV **collagenase** and tissue inhibitor of **metalloproteinases** 2. The total amount of type IV **collagenase** antigen was significantly elevated in the **urine** of 37 transitional cell carcinoma patients (range, 0-1081 ng/ml; mean, 318.4 +/- 147.3) compared to 19 normal controls ($P < or = 0.004$) and 17 inflammatory disease controls ($P < or = 0.011$). Immunohistochemical staining of bladder tumor biopsies verified that the transitional cell carcinoma cells were producing the M(r) 72,000 enzyme. Thus, M(r) 72,000 type IV **collagenase**, which is present in the **urine** in many forms including fragments and complexes with inhibitors, may be a useful marker for bladder cancer diagnosis or prognosis.
CT Check Tags: Human; Male
Antibodies, Monoclonal

***Bladder Neoplasms: EN, enzymology**
Bladder Neoplasms: UL, ultrastructure
Bladder Neoplasms: UR, urine
Blotting, Western
***Carcinoma, Transitional Cell: EN, enzymology**
Carcinoma, Transitional Cell: UL, ultrastructure
Carcinoma, Transitional Cell: UR, urine
Collagenases: AI, antagonists & inhibitors
Collagenases: CL, classification
***Collagenases: UR, urine**
Cystitis: EN, enzymology
Cystitis: UR, urine
Cytoplasm: EN, enzymology
Cytoplasm: UL, ultrastructure
Electrophoresis, Polyacrylamide Gel
Enzyme-Linked Immunosorbent Assay
Fluorescent Antibody Technique
Gelatinase B
Hematuria: EN, enzymology
Hematuria: UR, urine
Hypospadias: EN, enzymology
Hypospadias: UR, urine
Immunoenzyme Techniques
Kidney Calculi: EN, enzymology
Kidney Calculi: UR, urine
Molecular Weight
Papilloma: EN, enzymology
Papilloma: UR, urine
Spermatocele: EN, enzymology
Spermatocele: UR, urine
Urethritis: EN, enzymology
Urethritis: UR, urine

CN 0 (Antibodies, Monoclonal); EC 3.4.24.- (**Collagenases**); EC 3.4.24.35 (**Gelatinase** B)

L141 ANSWER 11 OF 19 MEDLINE
AN **93189593** MEDLINE
DN **93189593** PubMed ID: **8446598**
TI **Stromelysin** 3 belongs to a subgroup of proteinases expressed in breast carcinoma fibroblastic cells and possibly implicated in tumor progression.
AU Wolf C; Rouyer N; Lutz Y; Adida C; Loriot M; Bellocq J P; Chambon P; Basset P
CS Laboratoire de Genetique Moleculaire des Eucaryotes, Centre National de la Recherche Scientifique, Strasbourg, France.
SO PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, **(1993 Mar 1)** 90 (5) 1843-7.
Journal code: 7505876. ISSN: 0027-8424.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199304
ED Entered STN: 19930416
Last Updated on STN: 20000303
Entered Medline: 19930408
AB The expression of the **stromelysin** 3 (ST3) gene, which encodes a putative **matrix metalloproteinase**, was studied during breast cancer progression. The ST3 gene is expressed in all invasive breast carcinomas, in a number of their metastases, and in some in situ carcinomas where the probability of detecting ST3 transcripts correlates with the known risk of these carcinomas to become invasive. ST3 RNA and protein were specifically detected in fibroblastic cells immediately

surrounding the neoplastic cells in both primary and metastatic tumors. This expression pattern distinguishes the ST3 gene from other **matrix metalloproteinase** genes, most notably from the 72-kDa type IV **collagenase** gene, which can be expressed in fibroblastic cells distributed throughout the stroma of primary breast carcinomas. Furthermore, high levels of 72-kDa type IV **collagenase**, but not of ST3 transcripts, are detected in benign breast fibroadenomas. Interestingly, the urokinase and ST3 genes exhibit very similar patterns of expression in breast carcinomas, which suggests that their products may cooperate during cancer progression.

CT Check Tags: Human; Support, Non-U.S. Gov't
Adenoma: EN, enzymology
Adenoma: GE, genetics
Adenoma: PA, pathology
Biological Markers
Blotting, Northern
Breast Neoplasms: EN, enzymology
***Breast Neoplasms: GE, genetics**
Breast Neoplasms: PA, pathology
Carcinoma: EN, enzymology
***Carcinoma: GE, genetics**
Carcinoma: PA, pathology
Fibroblasts: EN, enzymology
Gene Expression Regulation, Neoplastic
In Situ Hybridization
*Metalloendopeptidases: GE, genetics
Neoplasm Metastasis
Prognosis
RNA, Messenger: GE, genetics
Urinary Plasminogen Activator: GE, genetics

CN 0 (Biological Markers); 0 (RNA, Messenger); EC 3.4.21.73 (**Urinary** Plasminogen Activator); EC 3.4.24 (Metalloendopeptidases); EC 3.4.24.- (**stromelysin** 3)

L141 ANSWER 12 OF 19 MEDLINE
AN **92198395** MEDLINE
DN **92198395** PubMed ID: **1801751**
TI Biological and clinical relevance of the urokinase-type plasminogen activator (uPA) in breast cancer.
AU Schmitt M; Goretzki L; Janicke F; Calvete J; Eulitz M; Kobayashi H; Chucholowski N; Graeff H
CS Frauenklinik, Technischen Universitat Munchen, Klinikum rechts der Isar, FRG.
SO BIOMEDICA BIOCHIMICA ACTA, **(1991)** 50 (4-6) 731-41.
Journal code: 8304435. ISSN: 0232-766X.
CY GERMANY: Germany, Federal Republic of
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199204
ED Entered STN: 19920509
Last Updated on STN: 20000303
Entered Medline: 19920423
AB Tumor cell invasion and metastasis is a multifactorial process, which at each step may require the action of proteolytic enzymes such as **collagenases**, cathepsins, plasmin, or plasminogen activators. An enzymatically inactive proenzyme form of the urokinase-type plasminogen activator (pro-uPA) is secreted by tumor cells which may be converted to an enzymatically active two-chain uPA-molecule (HMW-uPA) by plasmin-like enzymes. Action of proteases on pro-uPA may generate the enzymatically active or inactive high-molecular-weight form of uPA (HMW-uPA). Some proteases (plasmin, cathepsin B and L, kallikrein, trypsin or thermolysin) activate pro-uPA by cleaving the peptide bond Lys158 and IIe159. Other

proteases (elastase, thrombin) cleave pro-uPA at different positions to yield enzymatically inactive HMW-uPA. HMW-uPA may be split into the enzymatically active LMW-uPA and the enzymatically inactive ATF (amino terminal fragment). ATF may be cleaved between peptide sequence 20 and 40 within the receptor binding domain of uPA (GFD). Such impaired ATF does not bind to uPA-receptors. Action of the bacterial endoproteinase Asp-N from Pseudomonas fragi mutant on pro-uPA or HMW-uPA, however, generates intact ATF which efficiently competes for binding of HMW-uPA or pro-uPA to receptors on tumor cells. High uPA-antigen content (pro-uPA, HMW-uPA, or LMW-uPA) in breast cancer tissue (not in plasma) indicates an elevated risk for the patient of recurrences and shorter overall survival. Thus pro-uPA/uPA-antigen content in breast cancer tissue serves as an independent prognostic parameter for the outcome of the disease. Cathepsin D is also an independent prognostic factor for recurrences and overall survival. High content of cathepsin D in breast cancer tumors is, however, not correlated with elevated levels of pro-uPA/uPA indicating that synthesis and release of cathepsin D and pro-uPA/uPA are independent events.

CT Check Tags: Female; Human; Support, Non-U.S. Gov't
Binding Sites
***Breast Neoplasms: EN, enzymology**
Breast Neoplasms: SC, secondary
Enzyme Precursors: ME, metabolism
Neoplasm Invasiveness
Peptide Fragments: ME, metabolism
Plasminogen Activators: ME, metabolism
Prognosis
***Urinary Plasminogen Activator: ME, metabolism**

RN 99149-95-8 (saruplase)

CN 0 (Enzyme Precursors); 0 (Peptide Fragments); EC 3.4.21.- (Plasminogen Activators); EC 3.4.21.73 (**Urinary** Plasminogen Activator)

L141 ANSWER 13 OF 19 MEDLINE

AN **92135374** MEDLINE

DN **92135374** PubMed ID: **1966799**

TI Influence of urokinase on cell proliferation and invasion.

AU Binder B R

CS Department of Clinical Experimental Physiology, University of Vienna, Austria.

SO BLOOD COAGULATION AND FIBRINOLYSIS, **(1990 Dec)** 1 (6) 717-20.
Ref: 38
Journal code: 9102551. ISSN: 0957-5235.

CY ENGLAND: United Kingdom

DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)

LA English

FS Priority Journals

EM 199203

ED Entered STN: 19920329
Last Updated on STN: 20000303
Entered Medline: 19920311

AB The urokinase-dependent plasminogen activating system is regulated not only by zymogen to enzyme conversion of pro-urokinase and inhibition of the active enzyme by plasminogen activator inhibitors, but also by regulated expression of urokinase receptors on the cell surface. Receptor-bound pro-urokinase in turn becomes activated and is capable of activating plasminogen probably bound site by site to urokinase to a cell surface receptor. Plasmin by itself or via activation of pro-**collagenase** to **collagenase** is capable of degrading the extracellular matrix, in turn mediating processes like invasion, metastasis and tumour growth. In addition, in some cell lines the urokinase-dependent system mediated via receptor-bound active urokinase is

also capable of eliciting a mitogenic response of the cells. Therefore, the urokinase-dependent plasminogen activating system might not only be responsible for mediating extravascular proteolysis but might also be an autocrine mitogen for some cell lines.

CT Check Tags: Animal; Human
*Cell Division
Cell Division: DE, drug effects
Enzyme Activation
Enzyme Precursors: ME, metabolism
Models, Biological
***Neoplasm Invasiveness: PP, physiopathology**
*Plasminogen: ME, metabolism
Plasminogen Inactivators: PD, pharmacology
Receptors, Cell Surface: ME, metabolism
Urinary Plasminogen Activator: AI, antagonists & inhibitors
Urinary Plasminogen Activator: PD, pharmacology
***Urinary Plasminogen Activator: PH, physiology**

RN 9001-91-6 (Plasminogen)

CN 0 (Enzyme Precursors); 0 (Plasminogen Inactivators); 0 (Receptors, Cell Surface); 0 (plasminogen activator, urokinase receptors); EC 3.4.21.73 (**Urinary** Plasminogen Activator)

L141 ANSWER 14 OF 19 MEDLINE

AN **91162398** MEDLINE

DN **91162398** PubMed ID: **2127427**

TI A new method for evaluation of **urinary** autocrine motility factor and tumor cell **collagenase** stimulating factor as markers for **urinary** tract cancers.

AU Guirguis R; Javadpour N; Sharareh S; Biswas C; el-Amin W; Mansur I; Kim J S

CS Georgetown University School of Medicine, Washington DC 20007.

SO JOURNAL OF OCCUPATIONAL MEDICINE, **(1990 Sep)** 32 (9) 846-53.
Journal code: 7502807. ISSN: 0096-1736.

CY United States

DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS Priority Journals

EM 199104

ED Entered STN: 19910505
Last Updated on STN: 19910505
Entered Medline: 19910415

AB Over the past several years, many tumor markers, including cell surface antigens, T-antigen, ras p55, and ras p52 proteins, have been studied as potential tumor markers of bladder cancer. The lack of specificity and inconsistency of these markers led us to develop a new method for studying the **urinary** excretion of autocrine motility factor (uAMF) and tumor cell **collagenase** stimulating factor (TCSF) in 24-hour and first morning voided specimens. AMF is a glycoprotein secreted by the malignant cells and is responsible for cell locomotion, a key event in invasion and metastases of the malignant cells. TCSF is a membrane bound glycoprotein of tumor cells that stimulates fibroblast **collagenase** production. We have utilized an enzyme-linked immunoabsorption assay to detect the levels of uAMF and TCSF in **urine** samples collected from normal volunteers, patients with benign diseases, and patients with bladder cancer. Our data indicate that **urinary** concentrations of uAMF and TCSF are elevated in patients with bladder cancer. Furthermore, the levels of uAMF and TCSF are more elevated in invasive tumors as compared with benign counterparts. We have localized uAMF and TCSF in bladder cancer cells, utilizing immunohistologic techniques.

CT Check Tags: Human
Autocrine Motility Factor
Enzyme-Linked Immunosorbent Assay
***Membrane Glycoproteins: UR, urine**

***Neoplasm Proteins: UR, urine**
Regression Analysis
Single-Blind Method
***Tumor Markers, Biological: UR, urine**
***Urologic Neoplasms: DI, diagnosis**
CN 0 (Autocrine Motility Factor); 0 (Membrane Glycoproteins); 0 (Neoplasm Proteins); 0 (Tumor Markers, Biological); 0 (tumor cell **collagenase** stimulating factor)

L141 ANSWER 15 OF 19 MEDLINE
AN **88026657** MEDLINE
DN **88026657** PubMed ID: **3664443**
TI A routine method for cytogenetic analysis of small **urinary** bladder tumor biopsies.
AU Fraser C; Sullivan L D; Kalousek D K
CS Terry Fox Laboratory, B.C. Cancer Research Centre, Vancouver, Canada.
SO CANCER GENETICS AND CYTOGENETICS, **(1987 Nov)** 29 (1) 103-8.
Journal code: 7909240. ISSN: 0165-4608.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198711
ED Entered STN: 19900305
Last Updated on STN: 19900305
Entered Medline: 19871125
AB A method that allows routine cytogenetic analysis of small cystoscopic biopsies from urothelial tumors is described. This method is based on prolonged mild **collagenase** disaggregation, a 12-16 hour culture, and harvesting procedures adapted to give maximal metaphase recovery. In addition to providing a means for cytogenetic studies of small biopsies from **urinary** bladder tumors, this method provides the advantages of direct preparations, with chromosome morphology and banding sufficient for karyotypic analysis. Conventional cell synchronization techniques, applied to this system, should enable high-resolution banding and optimize analysis.
CT Check Tags: Human; Support, Non-U.S. Gov't
***Bladder Neoplasms: GE, genetics**
Bladder Neoplasms: PA, pathology
Carcinoma, Transitional Cell: GE, genetics
Carcinoma, Transitional Cell: PA, pathology
Cells, Cultured
Chromosome Banding
Karyotyping
Neoplasm Metastasis
Prognosis

L141 ANSWER 16 OF 19 MEDLINE
AN **85280304** MEDLINE
DN **85280304** PubMed ID: **2992566**
TI Role for different cell proteinases in cancer invasion and cytolysis.
AU Zucker S; Beck G; DiStefano J F; Lysik R M
SO BRITISH JOURNAL OF CANCER, **(1985 Aug)** 52 (2) 223-32.
Journal code: 0370635. ISSN: 0007-0920.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198510
ED Entered STN: 19900320
Last Updated on STN: 20000303
Entered Medline: 19851015
AB The crucial role of non-plasminogen dependent serine **proteinases**

is tissue invasive and cytolytic functions of Walker 256 cancer cells has been documented using a rat **urinary** bladder invasion and a 125I-labelled fibroblast cytolysis assay. The invasive capacity of these cancer cells was abrogated by non toxic concentrations of the serine **proteinase** inhibitors, diisopropylfluorophosphate and phenylmethylsulfonylfluoride, but not by **metallo** or cysteine **proteinase** inhibitors. Although tumour cell **collagenase** activity and plasminogen activator were demonstrated, these proteolytic enzymes were not essential in these in vitro assays. These results suggest that different categories of **proteinases** play specific roles in the complicated process of cancer invasion.

CT Check Tags: Animal; Male; Support, U.S. Gov't, Non-P.H.S.
Bladder: PA, pathology
***Carcinoma 256, Walker: EN, enzymology**
Carcinoma 256, Walker: PA, pathology
Cell Communication
Cell Membrane: EN, enzymology
Cell Survival
Collagen: ME, metabolism
*Endopeptidases: ME, metabolism
Fibroblasts
Metalloendopeptidases
Microbial Collagenase: ME, metabolism
Neoplasm Invasiveness
Organ Culture
Plasminogen Activators: ME, metabolism
Protease Inhibitors
Rats
Rats, Inbred Strains
Serine Endopeptidases
Tumor Stem Cell Assay

RN 9007-34-5 (Collagen)

CN 0 (Protease Inhibitors); EC 3.4.- (Endopeptidases); EC 3.4.21 (Serine Endopeptidases); EC 3.4.21.- (Plasminogen Activators); EC 3.4.24 (Metalloendopeptidases); EC 3.4.24.3 (Microbial **Collagenase**)

L141 ANSWER 17 OF 19 MEDLINE

AN **85048707** MEDLINE

DN **85048707** PubMed ID: **6093995**

TI Cysteine proteinases and metastasis.

AU Sloane B F; Honn K V

NC CA29997 (NCI)
CA36481 (NCI)

SO CANCER METASTASIS REVIEWS, **(1984)** 3 (3) 249-63. Ref: 124
Journal code: 8302417. ISSN: 0167-7659.

CY Netherlands

DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)

LA English

FS Priority Journals

EM 198501

ED Entered STN: 19900320
Last Updated on STN: 20000303
Entered Medline: 19850103

AB Cysteine proteinases are a subclass of endopeptidases which require activation by thiol reagents. A tumor cysteine proteinase which appears to be related to lysosomal cathepsin B has been implicated in the ability of tumor cells to invade the extracellular matrix and to metastasize to secondary sites. Lysosomal cathepsin B can degrade such components of the extracellular matrix as collagen, fibronectin and proteoglycans. Activity of this cathepsin B-like cysteine proteinase (CB) has been correlated with tumor malignancy in a number of tumor lines yet not in all tumor lines studied. CB activity in tumors seems to be associated with the viable

tumor cells, probably with the plasma membrane of these tumor cells. CB activity has been measured in the sera, **urine**, ascites fluid and pancreatic fluid of tumor-bearing patients. CB is released from tumor explants and tumor cells in vitro as well as from normal subcutaneous tissue exposed to tumor-conditioned medium. Cathepsin B from normal tissues is rapidly inactivated above pH 7.0. Therefore, CB in tumor cell membranes or released from tumor cells (or from host cells in response to tumor cells) may not possess proteolytic activity at neutral pH and thus may not facilitate tumor cell invasion. However, CB exhibits enhanced stability at neutral or slightly alkaline pH's. There is not yet definitive proof that CB plays a role in tumor invasion and metastasis. There is, however, an increasing body of correlative evidence relating CB activity and tumor malignancy. This correlative evidence plus preliminary evidence that tumor CB can degrade components of the extracellular matrix in vitro suggests that CB may be one proteinase active in a proteolytic cascade resulting in tumor invasion and metastasis.

CT Check Tags: Animal; Human; Support, Non-U.S. Gov't; Support, U.S. Gov't, P.H.S.
Cathepsin B
Cathepsins
Cell Membrane: EN, enzymology
Cell Movement
Cells, Cultured
Cysteine Endopeptidases
*Endopeptidases: ME, metabolism
Endopeptidases: SE, secretion
Lysosomes: EN, enzymology
Microbial Collagenase: ME, metabolism
***Neoplasm Metastasis: PP, physiopathology**
***Neoplasms: EN, enzymology**
Neoplasms: PA, pathology

CN EC 3.4.- (Cathepsins); EC 3.4.- (Endopeptidases); EC 3.4.22 (Cysteine Endopeptidases); EC 3.4.22.1 (Cathepsin B); EC 3.4.24.3 (Microbial **Collagenase**)

L141 ANSWER 18 OF 19 MEDLINE
AN **78056571** MEDLINE
DN **78056571** PubMed ID: **201108**
TI [**Collagenase** activity in an animal and a human carcinoma (author's transl)].
Kollagenaseaktivitat in einem tierischen und einem menschlichen Karzinom.
AU Wirl G
SO WIENER KLINISCHE WOCHENSCHRIFT, **(1977 Nov 25)** 89 (22) 766-8.
Journal code: 21620870R. ISSN: 0043-5325.
CY Austria
DT Journal; Article; (JOURNAL ARTICLE)
LA German
FS Priority Journals
EM 197801
ED Entered STN: 19900314
Last Updated on STN: 19900314
Entered Medline: 19780127
AB High amounts of **collagenase** were found in chemically-induced carcinomas of the mouse skin and in carcinomas of the human **urinary** bladder. Part of the total enzyme activity was detected in the supernatant after sedimentation of the tumour homogenate at 6000 x g and dialysis for 48 hours. The remainder was extracted from the pellet by the use of 5 M urea. Though the localization of enzyme production and regulation of enzyme activity is still unclear, the **collagenases** may be implicated in the breakdown of collagen structures during tumour invasion.
CT Check Tags: Animal; Female; Human; Male
***Bladder Neoplasms: EN, enzymology**

English Abstract
Mice
***Microbial Collagenase: ME, metabolism**
Neoplasm Invasiveness
***Skin Neoplasms: EN, enzymology**
CN EC 3.4.24.3 (Microbial **Collagenase**)

L141 ANSWER 19 OF 19 MEDLINE
AN **76146773** MEDLINE
DN **76146773** PubMed ID: **176412**
TI Epithelial cell cultures from normal and cancerous human tissues.
AU Owens R B; Smith H S; Nelson-Rees W A; Springer E L
SO JOURNAL OF THE NATIONAL CANCER INSTITUTE, **(1976 Apr)** 56 (4) 843-9.
Journal code: 7503089. ISSN: 0027-8874.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 197606
ED Entered STN: 19900313
Last Updated on STN: 19900313
Entered Medline: 19760602
AB Thirty epithelial cell strains were isolated from human carcinomas and normal epithelial tissues by **collagenase** digestion and selective removal of fibroblasts with trypsin-Versene. Most strains were obtained from metastatic carcinomas or epithelia of the **urinary** and intestinal tracts. The success rate for growth of both neoplastic and normal tissues (excluding skin) was 38%. Six of these strains showed gross morphologic and chromosome changes typical of malignant cells. Nine resembled normal epithelium. The other 15 exhibited some degree of morphologic change from normal.
CT Check Tags: Human; Support, U.S. Gov't, P.H.S.
Cell Division
Cell Separation
*Cells, Cultured
*Epithelial Cells
*Epithelium
Microbial Collagenase
***Neoplasms**
Neoplasms: PA, pathology
Trypsin
CN EC 3.4.21.4 (Trypsin); EC 3.4.24.3 (Microbial **Collagenase**)

```
=> e matrix metalloproteinases+all/ct
E1           0   BT7   D Chemicals and Drugs/CT
E2           0    BT6   Chemical Actions and Uses/CT
E3           0     BT5   Chemical Actions/CT
E4           0   BT7   D Chemicals and Drugs/CT
E5           0    BT6   Enzymes, Coenzymes, and Enzyme Inhibitors/CT
E6       16823     BT5   Enzymes/CT
E7        5575      BT4   Hydrolases/CT
E8       18893       BT3   Peptide Hydrolases/CT
E9       17753        BT2   Endopeptidases/CT
E10       8414         BT1   Metalloendopeptidases/CT
E11       1664          -->   Matrix Metalloproteinases/CT
E12       7228          MN    D8.586.277.656.300.480.525./CT
                         EC     EC 3.4.24.-
                         DC     an INDEX MEDICUS major descriptor
                         NOTE   A family of zinc-dependent
                                METALLOENDOPROTEINASES that are involved in
                                the degradation of EXTRACELLULAR MATRIX
```

components. EC 3.4.24.-.
INDX /antag is permitted but TISSUE INHIBITOR OF METALLOPROTEINASES is available; check MeSH for specific matrix metalloproteinases
AQ AD AE AI AN BI BL CF CH CL CS CT DE DF DU EC GE HI IM IP ME PD PH PK PO RESD SE ST TO TU UL UR
PNTE Metalloendopeptidases (1988-1999)
HNTE 2000
MHTH NLM (2000)

E13	0	UF	MMPs/CT
E14	2472	NT1	Gelatinase A/CT
E15	2699	NT1	Gelatinase B/CT
E16	1183	NT1	Interstitial Collagenase/CT
E17	333	NT1	Matrilysin/CT
E18	261	NT1	Neutrophil Collagenase/CT
E19	1475	NT1	Stromelysin 1/CT

********* END***

=> d his

(FILE 'HOME' ENTERED AT 16:39:29 ON 02 JUL 2003)
SET COST OFF

FILE 'REGISTRY' ENTERED AT 16:39:38 ON 02 JUL 2003

L1	319	S	MMP
L2	1574	S	(?METALLOPROTEASE? OR ?METALLOPROTEINASE?)/CNS
L3	532	S	(MATRIX(L)?METALLO?(L)(?PROTEASE? OR ?PROTEINASE?))/CNS
L4	61	S	L1 NOT L2,L3
L5	7	S	L4 NOT SQL/FA
L6	54	S	L4 NOT L5
L7	1709	S	L2-L3,L6
L8	646	S	(?GELATINASE? OR ?COLLAGENASE? OR ?STROMELYSIN?)/CNS
L9	2234	S	L7,L8
		E	"E C E.4.24"/CN
L10	2255	S	(?METALLO?(L)(?PROTEASE? OR ?PROTEINASE?))/CNS
L11	599	S	L10 NOT L1-L9
L12	47	S	L11 NOT SQL/FA
L13	2833	S	L9-L12

FILE 'HCAPLUS' ENTERED AT 16:45:08 ON 02 JUL 2003

L14	29027	S	L13
L15	17098	S	?METALLOPROTEINASE? OR ?METALLOPROTEASE? OR ?METALLO?(L)(?PRO
L16	10664	S	MATRIX(L)(?METALLOPROTEINASE? OR ?METALLOPROTEASE? OR ?METALL
L17	8017	S	MMP
L18	33659	S	L14-L17
		E	MMP
L19	1660	S	E4-E47
L20	33885	S	L18,L19
L21	361	S	L20 AND URINE
		E	URINE ANALYSIS/CT
L22	38262	S	E3,E5
		E	E3+ALL
		E	E5+ALL
L23	80202	S	E3
L24	250	S	L20 AND L22,L23
L25	361	S	L21,L24
L26	165	S	L25 AND (PY<=1996 OR PRY<=1996 OR AY<=1996)

FILE 'REGISTRY' ENTERED AT 16:51:19 ON 02 JUL 2003

L27	20501	S	(?PROTEASE? OR ?PROTEINASE?)/CNS
L28	18229	S	L27 NOT L13

FILE 'HCAPLUS' ENTERED AT 16:51:34 ON 02 JUL 2003

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L29      115014 S L28
L30      140491 S ?PROTEASE? OR ?PROTEINASE?
L31        1638 S L29,L30 AND (URINE OR L22 OR L23)
L32        1079 S L31 AND (PY<=1996 OR PRY<=1996 OR AY<=1996)
L33        1171 S L26,L32
L34         138 S L33 AND (?NEOPLAS? OR ?TUMOR? OR ?TUMOUR? OR ?MALIGN? OR ?MET
                E NEOPLASM/CT
L35          26 S L33 AND E2-E30
L36          10 S L33 AND E41-E45,E47,E48,E53-E57
                E E3+ALL
L37          11 S L33 AND E3-E8
L38          57 S L33 AND E2+NT
L39           3 S L33 AND E116+NT
L40           8 S L33 AND (E121+NT OR E122+NT)
L41         153 S L34-L40
                E DIAGNOSIS/CT
L42        7719 S E5
                E E3+ALL
L43       43875 S E2+NT
                E E10+ALL
L44       10041 S E1
L45          17 S L33 AND L42-L44
L46           9 S L41 AND L45
                SEL DN AN 1 3 6 7 8
L47           5 S E1-E15 AND L46
L48           4 S L46 NOT L47
                E KIDNEY CANCER/CT
                E E3+ALL
L49        6810 S E2+NT
                E E2+ALL
L50          79 S E5
                E SKIN CANCER/CT
                E E3+ALL
L51        7669 S E2+NT
                E E2+ALL
L52         209 S E5
L53       10853 S E30+NT
                E E30+ALL
L54         400 S E4
                E OVARY CANCER/CT
                E E3+ALL
L55       10138 S E2+NT
                E E2+ALL
L56          94 S E5
                E PROSTATE CANCER/CT
L57        6430 S E10-E14,E16-E17,E22
L58       11706 S E25-E30
L59         246 S E33
                E S E39,E40
                E PROSTATE GLAND, DISEASE/CT
L60        3619 S E5
                E PROSTATE CANCER/CT
                E E3+ALL
L61       11706 S E2
                E NERVOUS SYSTEM CANCER/CT
                E E9+ALL
L62        1881 S E2
                E E2+ALL
                E E3+ALL
L63         683 S E47-E49,E52
                E BREAST CANCER/CT
                E E3+ALL
L64       31953 S E2
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                E MAMMARY GLAND/CT
L65         10215 S E4,E5,E7,E8,E15,E16,E22
L66         31953 S E26-E35
L67          6750 S E40,E41
                E LUNG CANCER/CT
                E E3+ALL
L68         21137 S E2+NT
                E E2+ALL
L69           235 S E5
                E RETINAL CANCER/CT
                E RETINA CANCER/CT
                E EYE CANCER/CT
                E E3+ALL
L70          1381 S E2+NT
                E E2+ALL
L71             8 S E5
L72          1489 S E3+NT(L)TUMOR?
L73           772 S E3+NT(L)CANCER?
                E RETINA/CT
                E E3+ALL
L74            95 S E2(L)(TUMOR? OR NEOPLAS? OR CANCER?)
                E LIVER CANCER/CT
                E E25+ALL
L75         24777 S E2+NT
                E E2+ALL
L76           856 S E5
                E PANCREATIC CANCER/CT
                E E54+ALL
L77          6243 S E2+NT
                E E2+ALL
L78            21 S E5
                E BLADDER CANCER/CT
L79          1388 S E12
                E E12+ALL
                E E3+ALL
                E LYMPHOMA/CT
                E E3+ALL
L80         15103 S E7,E6+NT
                E DIGESTIVE TRACT CANCER/CT
L81           325 S E7
                E E7+ALL
                E DIGESTIVE TRACT/CT
L82           242 S E5
L83          1684 S E29,E30
                E GASTROINTESTIN/CT
                E E27+ALL
L84          1684 S E2
L85            31 S L49-L84 AND L33
L86             4 S L85 AND L42-L44
                E UROGENITAL CANCER/CT
                E E7+ALL
L87         33122 S E4,E3+NT(L)(CANCER? OR NEOPLAS? OR TUMOR?)
L88            21 S L87 AND L33
L89             3 S L88 AND L42-L44
L90             5 S L47,L86,L89
L91            43 S L45,L48,L85,L88 NOT L90
                SEL DN AN 3 9 12-14 16-18 21 24 28 32 34-37 39-43
L92            21 S L91 AND E1-E63
L93            26 S L90,L92
L94           113 S L41 NOT L88-L93
                SEL DN AN 2 7 9 16 25 26 47 81 89 90 93 94 95 96 98 101-105 107
L95            22 S L94 AND E64-E129
L96            48 S L93,L95 AND L14-L26,L29-L95
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L97          43 S L96 AND (?TUMOR? OR ?TUMOUR? OR ?METAST? OR ?MALIGN? OR ?CANC
L98           5 S L96 NOT L97
                SEL DN AN 1 5
L99           2 S L98 AND E130-E135
L100         45 S L97,L99
                SEL HIT RN

     FILE 'REGISTRY' ENTERED AT 17:39:20 ON 02 JUL 2003
L101         26 S E136-E161

     FILE 'HCAPLUS' ENTERED AT 17:39:40 ON 02 JUL 2003
                E MOSES M/AU
L102         57 S E3,E4,E13-E15
                E FREEMAN M/AU
L103        136 S E3,E20
L104         14 S E91
L105         52 S E108,E109,E112
                E WIEDERSCHAIN D/AU
L106         20 S E4-E6
L107         39 S L102-L106 AND L20,L29,L30
L108          7 S L107 AND L31
L109         49 S L100,L108
                SEL HIT RN L108

     FILE 'REGISTRY' ENTERED AT 17:42:19 ON 02 JUL 2003
L110         10 S E1-E10
L111         26 S L101,L110

     FILE 'REGISTRY' ENTERED AT 17:42:44 ON 02 JUL 2003
L112         11 S L111 AND L1-L13
L113         25 S L111 AND L27
L114         26 S L112,L113,L111

     FILE 'HCAPLUS' ENTERED AT 17:43:57 ON 02 JUL 2003

     FILE 'MEDLINE' ENTERED AT 17:44:52 ON 02 JUL 2003
L115       1270 S L13
L116      15559 S L15-L17
                E MMP
L117       7300 S E3-E27
L118      15765 S L115-L117
L119       1157 S L112
L120      15765 S L118,L119
                E MATRIX METALLOPROTEINASE/CT
                E E15+ALL
L121       7228 S E11+NT
L122      21341 S GELATINASE OR COLLAGENASE OR MATRILYSIN OR NEUTROPHIL COLLAGE
L123      15936 S L120-L122 AND PY<=1996
                E URINE/CT
                E E3+ALL
L124     151929 S E4+NT
L125         64 S L123 AND L124
L126        278 S L123 AND URIN?
L127        278 S L125,L126
L128         82 S L127 AND C4./CT
L129          3 S L128 NOT AB/FA
L130         79 S L128 NOT L129
                SEL DN AN 1 8 15 16 17 36 43-47 59 61 67 73 76-79
L131         19 S L130 AND E1-E57
L132         61 S L127 AND E1./CT
L133         63 S L127 AND DI./CT
                E TUMOR MARKER/CT
L134         12 S E11+NT AND L127
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L135 112 S L132-L134
L136 56 S L135 AND L128
L137 16 S L131 AND L136
L138 3 S L131 NOT L137
L139 19 S L137,L138
L140 40 S L136 NOT L131,L139
L141 19 S L139 AND L115-L140

FILE 'MEDLINE' ENTERED AT 17:57:40 ON 02 JUL 2003
E MATRIX METALLOPROTEINASES+ALL/CT